

THE UNIVERSITY OF NORTH CAROLINA

THE ONE HUNDRED AND
TWENTIETH SESSION



THE CATALOGUE
1914-1915

1915

APRIL							MAY							JUNE						
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1916

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CALENDAR

1915

<i>June 16-July 28</i>	Summer Term for Teachers.
<i>June 17-August 27</i>	Summer Law School.
<i>September 1-4</i>	<i>Wednesday to Saturday.</i> Examinations for Removal of Conditions.
<i>September 6-8</i>	<i>Monday to Wednesday.</i> Entrance Examinations. Registration.
<i>September 9</i>	<i>Thursday.</i> Lectures begin (Fall Term).
<i>October 12</i>	<i>Tuesday.</i> University Day.
<i>November 25</i>	Thanksgiving Day.
<i>December 22</i>	<i>Wednesday.</i> Christmas Recess begins (1:30.)

1916

<i>January 3-4</i>	<i>Monday and Tuesday.</i> Registration.
<i>January 5</i>	<i>Wednesday.</i> Lectures begin.
<i>January 19-29</i>	Mid-Year Examinations.
<i>January 31</i>	<i>Monday.</i> Lectures begin (Spring Term.)
<i>February 22</i>	<i>Tuesday.</i> Washington's Birthday.
<i>April 29</i>	<i>Saturday.</i> Selection of Commencement Orators.
<i>May 16-26</i>	Final Examinations.
<i>May 28</i>	<i>Sunday.</i> Baccalaureate Sermon. Sermon before the Y. M. C. A.
<i>May 29</i>	<i>Monday.</i> Senior Class Day. Inter-Society Banquet and Reunions.
<i>May 30</i>	<i>Tuesday.</i> Alumni Day. Meeting of the Board of Trustees. Inter-Society Debate.
<i>May 31</i>	<i>Wednesday.</i> Commencement Day. Summer Vacation begins.
<i>September 6-9</i>	<i>Wednesday to Saturday.</i> Examinations for Removal of Conditions.

PART ONE

FOUNDATION AND GOVERNMENT
BOARD OF TRUSTEES
OFFICERS OF ADMINISTRATION
OFFICERS OF INSTRUCTION
COMMITTEES



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THE UNIVERSITY

FOUNDATION AND GOVERNMENT. The University was established in obedience to the first Constitution of the State, which was adopted in December, 1776. A clause of section XLI declared that "all useful learning shall be duly encouraged, and promoted in one or more universities." The charter was granted by the General Assembly in 1789, the cornerstone of the Old East Building was laid in 1793, and the University was opened in 1795.

The title, preamble, and first section of the Act of incorporation are as follows:

"AN ACT TO ESTABLISH A UNIVERSITY IN THIS STATE."

"WHEREAS in all well regulated Governments, it is the indispensable Duty of every Legislature to consult the Happiness of a rising Generation, and endeavor to fit them for an honorable Discharge of the Social Duties of Life, by paying the strictest attention to their Education: And whereas an University supported by permanent Funds, and well endowed, would have the most direct Tendency to answer the above Purpose:

"I. *Be it therefore enacted by the General Assembly of the State of North Carolina, and it is hereby enacted by the Authority of the Same, That, Samuel Johnson, James Iredell, Charles Johnson, Hugh Williamson, Stephen Cabarrus, Richard Dobbs Spaight, William Blount, Benjamin Williams, John Sitgreaves, Frederick Hargett, Robert Snead, Archibald MacLaine, Honourable Samuel Ashe, Robert Dixon, Benjamin Smith, Honourable Samuel Spencer, John Hay, James Hogg, Henry William Harrington, William Barry Grove, Reverend Samuel McCorkle, Adlai Osborne, John Stokes, John Hamilton, Joseph Graham, Honourable John Williams, Thomas Person, Alfred Moore, Alexander Mebane, Joel Lane, Willie Jones, Benjamin Hawkins, John Haywood, senior, John Macon, William Richardson Davie, Joseph Dixon, William Lenoir, Joseph M'Dowell, James Holland and William Porter, Esquires, shall be and they are hereby declared to be a body politic and corporate to be known and distinguished by the name of The Trustees of the University of North Carolina** and by that name shall have perpetual Succession and a common Seal; and that they the Trustees and their Successors, by the Name aforesaid, or a Majority of them, shall be able and capable in Law to take, demand, receive and possess all Monies, Goods and Chattels that

* The corporate name has been changed to The University of North Carolina.

shall be given them for the Use of the said University, and the same apply according to the Will of the Donors, and by Gift, Purchase or Devise to take, have, receive, possess, enjoy and retain to them and their Successors forever, any Lands, Rents, Tenements and Hereditaments, of what Kind, Nature or Quality soever the same may be, in special Trust and Confidence that the same or Profits thereof shall be applied to and for the Use and Purpose of establishing the said University.”*

The University is governed by a board of trustees elected by the Legislature and is free from sectionalism, sectarian, or political control. The Governor of the State is *ex-officio* President of the Board of Trustees.

Article IV of the Constitution of 1876 contains the following provisions regarding the University:

“SEC. 6. The General Assembly shall have power to provide for the election of Trustees of the University of North Carolina, in whom, when chosen, shall be vested all the privileges, rights, franchises, and endowments thereof, in anywise granted to or conferred upon the Trustees of said University; and the General Assembly may make such provisions, laws, and regulations from time to time as may be necessary and expedient for the maintenance and management of said University.

“SEC. 7. The General Assembly shall provide that the benefits of the University, as far as practicable, be extended to the youth of the State free of expense for tuition: also all the property which has heretofore accrued to the State, or shall hereafter accrue, from escheats, unclaimed dividends, or distributive shares of the estate of deceased persons, shall be appropriated to the use of the University.”

LOCATION. The seat of the University is Chapel Hill, Orange County, twenty-eight miles northwest of Raleigh. Two daily passenger trains run between Chapel Hill and University Junction, a station on the North Carolina Railroad. The site for the institution was selected because of its healthfulness, its freedom from malaria, its supply of pure water, its beautiful scenery, and its central location in the State.

EQUIPMENT. The University campus contains forty-eight acres of land, affording ample grounds for building and for all sorts of athletic sports. The University owns, contiguous to the campus, five hundred acres of forest lands, which are partly laid off in walks and drives. The University has twenty-five buildings:

* Laws of the State of North Carolina, published by James Iredell, Eden-ton, MDCCXCI.

The South Building contains one lecture room and thirty living rooms.

The Old East Building contains two lecture rooms and twenty-eight living rooms.

The Old West Building contains two lecture rooms, the Historical Museum, and twenty-seven living rooms.

Person Hall contains the Pharmaceutical Laboratories and three lecture rooms.

Gerrard Hall is used for morning prayers, for mass meetings and other student assemblies, and for public lectures.

Smith Hall contains the Law library and lecture rooms.

The New West Building contains the Dialectic Literary Society's Hall, one lecture room, and eleven living rooms.

The New East Building contains the Philanthropic Literary Society's Hall, the Geological Laboratory and Museum, the offices of the North Carolina Geological Survey, and fourteen living rooms.

Memorial Hall commemorates the illustrious dead of the University. It is used at Commencement for public exercises.

The Alumni Hall contains the offices of administration, the Physical Laboratories, and nine lecture rooms.

The Carr Building, the gift of Gen. J. S. Carr, contains forty-two living rooms.

The Smith Building contains forty living rooms.

The William Preston Bynum, Jr., Gymnasium is the gift of Judge William Preston Bynum, in memory of his grandson, William Preston Bynum, Jr., of the class of 1893. It is furnished with modern apparatus, swimming pool, baths, lockers, and running track; and contains a trophy room and the office of the Instructor in Physical Training.

The Young Men's Christian Association Building is a valuable adjunct to the work of the Association.

Chemistry Hall contains Chemical Laboratories, lecture rooms, offices for instructors, and store rooms.

The new *Library* building, given by Andrew Carnegie, Esq., has now been in use for seven years.

Davie Hall, the Biological Laboratory, contains laboratories and lecture rooms for zoology and botany.

Caldwell Hall, just completed, is used exclusively by the School of Medicine, and contains laboratories, lecture rooms, dissecting rooms, and offices for the instructors.

The New Educational Building, the gift of the Peabody Board, contains lecture rooms, offices, library, and auditorium and is splendidly equipped in every detail.

The Infirmary, a spacious and completely equipped building, is open to all students of the University.

The New Dormitories, Battle, Vance, and Pettigrew Sections, contain seventy-two rooms in suite for the use of students.

Swain Hall contains a dining-room with a seating capacity of six hundred, kitchens, a bakery, and a cold storage plant.

University Inn is used for dormitory purposes, and contains a dining hall where students obtain board at fifteen dollars a month.

The Power House contains the electric lighting plant, the central heating plant, the pumps of the system of water supply, and the rooms of the University Press.

The general equipment has been improved by a thorough system of sewers and baths, a supply of pure water in all the buildings, and hot water heat in all the offices, recitation rooms, reading rooms and living rooms. A filter plant and reservoir have just been added.

COLLEGE YEAR. The College year begins on the second Thursday in September. It is divided into two terms of four and a half months each. Commencement is held on Wednesday before the first Thursday in June. The summer vacation begins on Commencement day and ends on the Wednesday before the second Thursday in September. There is a Christmas recess of about ten days. The twelfth of October (University Day), Thanksgiving Day, and the twenty-second of February (Washington's Birthday) are holidays.

DEGREES. The degrees of Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctor of Philosophy, Bachelor of Laws, and Graduate of Pharmacy are conferred by vote of the Trustees, after the recommendation of the Faculty, upon candidates who have satisfied the requirements of residence and study at the University. Students who are not

candidates for a degree may elect any studies they wish, subject to the Committee on Courses, devoting their time entirely to one or two subjects, or selecting groups of such subjects as suit their tastes and purposes.

GRADUATE STUDENTS. Free instruction is given in the College to graduates of colleges and universities. Women are admitted to the higher courses of the University.

PHYSICAL TRAINING. Hearty encouragement is given to athletic sports and to all kinds of physical culture. The athletic field furnishes ample facilities for football and baseball. The Lake Track is admirably adapted for running, bicycling, and general track athletics. Fifteen tennis courts are located on the campus. Systematic exercise in the Bynum Gymnasium under a skilled instructor is required of all students in the College, except Seniors.

GENERAL CULTURE. Chapel Exercises are conducted in Gerrard Hall, with the reading of the scriptures and singing, every weekday morning except Saturday, at 9:25 o'clock. At the same hour timely talks are given by different members of the Faculty. Attendance at this service is required of all under-graduates, unless especially excused. Bible classes for young men are taught in each of the four churches of the village every Sunday. Religious services are held twice a week, or oftener, in each church. A series of sermons is delivered annually by the University Preachers, chosen by the Trustees from the various denominations. Bible lectures are delivered every Sunday morning in Gerrard Hall. The Young Men's Christian Association meets three times a week, for prayer and other services, and conducts a series of Bible courses, which are largely attended by the students.

DISCIPLINE. The University endeavors to make young men manly and self-reliant, and to develop character by educating the conscience. The Faculty may, at their discretion, admonish, suspend, or dismiss students for neglect of duty or for misconduct.

MEDICAL ATTENTION. In order to secure responsible and efficient medical advice and to provide proper attention for the student during sickness the University employs a practicing phy-

sician and maintains a well appointed infirmary. The Infirmary is equipped with all necessary conveniences and comforts, is under the immediate supervision of the University Physician, and is provided with an experienced nurse. At the discretion of the University Physician a student may be admitted to its wards, and for such services as may be rendered by the staff no charges are made, but should any additional service (consultations, special nurses, operations requiring the attendance of a trained surgeon), recommended by the attending physician and approved by the parent or guardian, be necessary, the student will be required to pay for such services.

TRUSTEES

LOCKE CRAIG, GOVERNOR, President *ex-officio* of the Board of Trustees.

JAMES YADKIN JOYNER, SUPERINTENDENT OF PUBLIC INSTRUCTION, member *ex-officio* of the Board of Trustees.

RICHARD HENRY LEWIS, Secretary.

MEMBERS OF THE BOARD

1915 *

PAUL REESE CAPELLE.....	Nash.
KEMP PLUMMER BATTLE.....	Orange.
BENNEHAN CAMERON	Durham.
ADOLPHUS HILL ELLER	Forsythe.
JOHN WILLIAM FRIES.....	Forsythe.
WILLIAM ANDERSON GUTHRIE.....	Durham.
EDWARD JOSEPH HALE.....	Cumberland.
HENRY AUGUSTUS GILLIAM.....	Edgecombe.
NELSON MCPHERSON FERREBEE.....	Granville.
JOHN LAMB	Martin.
RICHARD HENRY LEWIS.....	Wake.
ANGUS WILTON MCLEAN.....	Robeson.
ROBERT DIGGS WIMBERLY CONNOR.....	Wake.
ADDISON GOODLOE MANGUM.....	Gaston.
JAMES SMITH MANNING.....	Durham.
JOHN ARCHIBALD PARKER.....	Mecklenburg.
JETER CONNELLY PRITCHARD.....	Buncombe.
THOMAS DAVIS WARREN.....	Craven.
†HENRY M. WEIL	Wayne.
JOHN KENYON WILSON.....	Pasquotank.

1917

ALEXANDER BOYD ANDREWS.....	Wake.
DAVID COLLIN BARNES	Hertford.
JOHN ROBERT WILLIAMS.....	Johnson.
ERIC ALONZO ABERNETHY.....	Orange.
JULIAN SHAKESPEARE CARR.....	Durham.
JOSEPHUS DANIELS	Wake.

* The legal term of office expires November 30 of the year indicated.

† Deceased.

AUGUSTUS WASHINGTON GRAHAM.....	Granville.
JOHN BRYAN GRIMES.....	Pitt.
*JOHN GEORGE HANNAH, JR.....	Chatham.
LUTHER THOMPSON HARTSELL.....	Cabarrus.
ALFRED WILLIAMS HAYWOOD.....	Alamance.
JOHN WETMORE HINSDALE, JR.....	Wake.
FRANKLIN P. HOBGOOD.....	Granville.
WILLIAM STAMPS HOWARD.....	Edgecombe.
HENRY ARMAND LONDON.....	Chatham.
PAUL JONES LONG.....	Northampton.
GEORGE MCNEILL ROSE.....	Cumberland.
WILLIAM RUFUS EDMUNDS.....	Guilford.
JAMES SPRUNT	New Hanover.
GEORGE STEPHENS	Mecklenburg.

1919

J. OSCAR ATKINSON.....	Alamance.
VICTOR SILAS BRYANT.....	Durham.
WILLIAM HYSLOP SUMMER BURGWIN, JR.....	Northampton.
WILLIAM PRESTON BYNUM, JR.....	Guilford.
JAMES OZBORN CARR.....	New Hanover.
JOHN HENRY DILLARD	Cherokee
JOHN WASHINGTON GRAHAM.....	Orange.
MARMADUKE JONES HAWKINS.....	Warren.
JOHN EDWARD SWAIN.....	Buncombe.
WALTER MURPHY	Rowan.
ROBERT STUART HUTCHISON.....	Mecklenburg.
CHARLES LEE SMITH.....	Wake.
DAVID STERN	Guilford.
ZEB VANCE WALSER.....	Davidson.
CHARLES WHEDBEE	Perquimans.
WILLIAM THORNTON WHITSETT.....	Guilford.
FRANCIS DONNELL WINSTON.....	Bertie.
CHARLES WILLIAMS WORTH	New Hanover.
FRED A. WOODWARD.....	Wilson.
EMMETT ROBERSON WOOTEN.....	Lenoir.

1921

THOMAS HALL BATTLE.....	Nash.
JAMES MCENTIRE CARSON	Rutherford.
WILLIAM EDMUND BREESE.....	Transylvania.

* Deceased.

FREDERICK JACKSON COXE.....	Anson.
WILLIE REID DALTON.....	Rockingham.
CLAUDIUS DOCKERY	Wake.
RUFUS ALEXANDER DOUGHTON.....	Allegheny.
ROBERT CHARLES ELLIS.....	Cleveland.
WILLIAM NASH EVERETT.....	Richmond.
JAMES ALEXANDER GRAY, JR.....	Forsyth.
THOMAS JACKSON GOLD	Guilford.
JOHN SPRUNT HILL	Durham.
JOHN ALLEN HOLT.....	Guilford.
CHARLES CLARKE LOUGHLIN.....	New Hanover.
GEORGE B. MCLEOD.....	Robeson.
JOHN MOTLEY MOREHEAD.....	Mecklenburg.
HAYWOOD PARKER	Buncombe.
AUGUSTUS HOBSON PRICE.....	Rowan.
JAMES DICK PROCTOR.....	Robeson.
ALFRED MOORE SCALES.....	Guilford.

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JULIAN S. CARR,	*THOMAS S. KENAN,
JOSEPHUS DANIELS,	RICHARD H. LEWIS,
CLAUDIUS DOCKERY,	JAMES S. MANNING,
JOHN W. GRAHAM,	CHARLES LEE SMITH,
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VISITING COMMITTEE

HAYWOOD PARKER,	R. D. W. CONNOR,
	DAVID STERN

* Deceased.

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CHARLES THOMAS WOOLLEN, Business Manager.
JULIUS ALGERNON WARREN, Treasurer and Bursar.
THOMAS JAMES WILSON, JR., Ph. D., Registrar.
EUGENE FRED PARKER, A. M., Recorder.

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ANDREW HENRY PATTERSON, A. M., Dean of the School of Applied Science.
CHARLES LEE RAPER, Ph. D., Dean of the Graduate School.
LUCIUS POLK McGEHEE, A. B., Dean of the School of Law.
ISAAC HALL MANNING, M. D., Dean of the School of Medicine.
EDWARD VERNON HOWELL, A. B., Ph. G., Dean of the School of Pharmacy.
MARCUS CICERO STEPHENS NOBLE, Dean of the School of Education.

THE LIBRARY

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NAN SPOTSWOOD STRUDWICK, B. L. S., Assistant Librarian.
ANNIE JUNGERMANN, Assistant Librarian.
FRANK HODGES COOPER, Assistant in the Library.
JAMES REGINALD MALLETT, Assistant in the Library.
WILLIAM CECIL RYMER, Assistant in the Library.
DANIEL LAMONT SECKINGER, A. B., Assistant in the Library.
WILLIAM RAYMOND TAYLOR, Assistant in the Library.

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LOUIS ROUND WILSON, Ph. D., Director.
EDGAR RALPH RANKIN, A. B., Assistant Director.

THE GYMNASIUM

ROBERT BAKER LAWSON, M. D., Director.
THOMAS MOORE PRICE, Assistant in the Gymnasium.
FRANCIS OSBORNE CLARKSON, Assistant in the Gymnasium.

YOUNG MEN'S CHRISTIAN ASSOCIATION

FRANK PORTER GRAHAM, A. B., General Secretary.

OFFICERS OF INSTRUCTION

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., President.

Ph. B., University of North Carolina, 1898; Librarian, *ibid.*, 1899; Instructor in English, *ibid.*, 1899-1901; Associate Professor of English, *ibid.*, 1901-1904; A. M., Columbia University, 1902; Student, *ibid.*, 1904-1905; Professor of English, University of North Carolina, 1904—; Dean of College of Liberal Arts, *ibid.*, 1909-1913; Acting President, *ibid.*, 1913-1914; President, *ibid.*, 1914—

KEMP PLUMMER BATTLE, A. M., LL. D., Professor Emeritus of History.

A. B., University of North Carolina, 1849; A. M., *ibid.*, 1852; Tutor in Mathematics, *ibid.*, 1850-1854; LL. D., Davidson College, 1879; President University of North Carolina, 1876-1891; Professor of History, *ibid.*, 1891-1907; LL. D., *ibid.*, 1910; Professor Emeritus of History, *ibid.*, 1907—

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., Francis Preston Venable Professor of Chemistry.

Student, University of Virginia, 1874-1879; University of Bonn, 1879-1880; A. M., Ph. D., University of Goettingen, 1881; Student, University of Berlin, 1889; LL. D., University of Pennsylvania, 1901; D. Sc., Lafayette College, 1902; LL. D., University of South Carolina, 1905; LL. D., University of Alabama, 1906; Professor of Chemistry, University of North Carolina, 1880—; President, *ibid.*, 1900-1914.

WALTER DALLAM TOY, M. A., Professor of the Germanic Languages and Literatures.

M. A., University of Virginia, 1882; Student, University of Leipzig, 1882-1883; University of Berlin, 1883-1885; Collège de France, 1885; Professor of Germanic Languages and Literatures, University of North Carolina, 1885—; Student, University of Berlin, 1910-1911.

WILLIAM CAIN, A. M., Professor of Mathematics.

A. M., North Carolina Military Polytechnic Institute, 1866; Professor of Mathematics and Engineering, Carolina Military Institute, 1874-1879; Professor of Mathematics and Engineering, South Carolina Military Academy, 1882-1889; Professor of Mathematics, University of North Carolina, 1889—

HENRY HORACE WILLIAMS, A. M., B. D., Professor of Philosophy.

A. B., A. M., University of North Carolina, 1883; Professor of

Philosophy, Trinity College (N. C.), 1885; B. D., Yale University, 1888; Fellow, Harvard University, 1889; Professor of Philosophy, University of North Carolina, 1890—

HENRY VANPETERS WILSON, Ph. D., Professor of Zoology.

A. B., Johns Hopkins University, 1883, Fellow, *ibid.*, 1887-1889; Ph. D., *ibid.*, 1888; Professor of Biology, University of North Carolina, 1891-1904; Student, University of Berlin, 1902-1903; Professor of Zoology, University of North Carolina, 1904—

COLLIER COBB, A. M., Professor of Geology and Mineralogy.

A. B., Harvard University, 1889; A. M., *ibid.*, 1894; Assistant in Geology, *ibid.*, 1888-1890; Instructor in Geology, Massachusetts Institute of Technology, 1890-1892; Instructor in Geology, Harvard Summer School, 1891; Assistant Professor of Geology, University of North Carolina, 1892-1893; Professor of Geology and Mineralogy, *ibid.*, 1893—

CHARLES STAPLES MANGUM, A. B., M. D., Professor of Anatomy.

A. B., University of North Carolina, 1891; M. D., Jefferson Medical College, 1894; Assistant and Demonstrator, *ibid.*, 1894-1895; Graduate Student, University of Chicago, 1906; Professor of Anatomy, University of North Carolina, 1896—; Student, Harvard University, 1912, 1913.

EDWARD VERNON HOWELL, A. B., Ph. G., Professor of Pharmacy.

A. B., Wake Forest College, 1892; Ph. G., Philadelphia College of Pharmacy, 1894; Professor of Pharmacy and Dean of the School of Pharmacy, University of North Carolina, 1897—

MARCUS CICERO STEPHENS NOBLE, Professor of Pedagogy.

Student, Davidson College and University of North Carolina; Commandant, Bingham School, 1880-1883; Superintendent of Schools, Wilmington, N. C., 1883-1898; Professor of Pedagogy, University of North Carolina, 1898—; Dean of the School of Education, *ibid.*, 1913—

ISAAC HALL MANNING, M. D., Professor of Physiology.

Student, University of North Carolina, 1882-1886; Assistant in Chemistry, *ibid.*, 1886; M. D., Long Island College of Medicine, 1897; Graduate Student, University of Chicago, 1901, 1903, Harvard University, 1902, 1906; Professor of Physiology, University of North Carolina, 1901—; Dean of the School of Medicine, *ibid.*, 1905—

GEORGE HOWE, Ph. D., Professor of the Latin Language and Literature.

A. B., Princeton University, 1897; A. M., Ph. D., University of Halle, 1903; Student, Oxford University, 1903; Professor of Latin Language and Literature, University of North Carolina, 1903—; Student, American School of Classical Studies at Rome, 1912-1913.

JOSEPH HYDE PRATT, Ph. D., Professor of Economic Geology. Ph. B., Yale University, 1893; Assistant in Chemistry, *ibid.*, 1894; Assistant in Mining, *ibid.*, 1895; Instructor in Mining, Harvard Summer School, 1895; Ph. D., Yale University, 1896; Instructor in Mineralogy, *ibid.*, 1896-1897; Lecturer on Economic Geology, University of North Carolina, 1899-1904; Professor of Economic Geology, *ibid.*, 1904—; State Mineralogist, 1897-1906; State Geologist, 1906—

CHARLES HOLMES HERTY, Ph. D., Smith Professor of General and Industrial Chemistry.

Ph. B., University of Georgia, 1886; Ph. D., Johns Hopkins University, 1890; Instructor in Chemistry, University of Georgia, 1891-1894; Adjunct Professor of Chemistry, *ibid.*, 1894-1902; Student, University of Zurich and University of Berlin, 1899-1900; Professor of Chemistry, University of North Carolina, 1905—; Dean of the School of Applied Science, *ibid.*, 1908-1911.

NATHAN WILSON WALKER, A. B., Professor of Secondary Education.

A. B., University of North Carolina, 1903; Superintendent of Schools at Ashboro, N. C., 1903-1905; Professor of Secondary Education, University of North Carolina, 1905—; State Inspector of Public High Schools, 1905—

WILLIAM DEBERNIERE MACNIDER, M. D., Professor of Pharmacology.

Assistant in Biology, University of North Carolina, 1899-1900; Assistant in Anatomy, *ibid.*, 1900-1901; M. D., *ibid.*, 1903; Student, University of Chicago, 1906, 1907, 1908; Professor of Pharmacology, University of North Carolina, 1905—

CHARLES LEE RAPER, Ph. D., Professor of Economics.

A. B., Trinity College (N. C.), 1892; Instructor in Greek and Latin, *ibid.*, 1892-1893; Professor of Latin, Greensboro Female College, 1894-1898; Fellow in History, Columbia University, 1899-1900; Lecturer in History, *ibid.*, 1900-1901; Ph. D., *ibid.*, 1902; Associate Professor of Economics and History, University of North Carolina, 1901-1906; Professor of Economics, *ibid.*, 1906—; Dean of Graduate School, *ibid.*, 1909—

WILLIAM CHAMBERS COKER, Ph. D., Professor of Botany.

B. S., University of South Carolina, 1894; Ph. D., Johns Hopkins University, 1901; Student, University of Bonn, 1901-1902; Associate Professor of Botany, University of North Carolina, 1902-1907; Professor of Botany, *ibid.*, 1907—

ARCHIBALD HENDERSON, Ph. D., Professor of Pure Mathematics.

A. B., University of North Carolina, 1898; A. M., *ibid.*, 1899; Instructor in Mathematics, *ibid.*, 1898-1902; Student, University of Chicago, 1901; Ph. D., University of North Carolina, 1902; Fellow and Tutor in Mathematics, University College and University of Chicago, 1902-1903; Associate Professor of Mathematics, University of North Carolina, 1902-1908; Professor of Pure Mathematics, *ibid.*, 1908—; Student, Cambridge University, University of Berlin, the Sorbonne, 1910-1911.

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph. D., Alumni Professor of History.

M. A., University of the South, 1900; Ph. D., Columbia University 1906; Associate Professor of History, University of North Carolina, 1906-1908; Professor of History, *ibid.*, 1908—

ANDREW HENRY PATTERSON, A. M., Professor of Physics.

Ph. B., B. E., University of North Carolina, 1891; A. B., Harvard University, 1892; A. M., *ibid.*, 1893; Instructor in Physics, University of Georgia, 1894-1897; Adjunct Professor of Physics and Electrical Engineering, *ibid.*, 1897-1898; Professor of Physics and Astronomy, *ibid.*, 1898-1908; Student, University of Berlin and Charlottenburg Technische Hochschule, 1905-1906; Student, Cambridge University, 1906; Professor of Physics, University of North Carolina, 1908—; Dean of the School of Applied Science, *ibid.*, 1911—

HENRY MCGILBERT WAGSTAFF, Ph. D., Professor of History.

Ph. B., University of North Carolina, 1899; Professor of Mathematics, Rutherford College (N. C.), 1900-1902; Ph. D., Johns Hopkins University, 1906; Acting Professor of Economics and History, Alleghany College, 1906-1907; Associate Professor of History, University of North Carolina, 1907-1909; Professor of History, *ibid.*, 1909—

PATRICK HENRY WINSTON, Professor of Law.

Student, University of Texas, 1897-1898; University of North Carolina, 1899-1900; Graduate United States Military Academy, 1905; Student, University of North Carolina School of Law, 1905; Professor of Law, *ibid.*, 1909—; Student, University of Michigan, 1910.

- WILLIAM MORTON DEY, Ph. D., Professor of the Romance Languages and Literatures.
B. A., M. A., University of Virginia, 1902; Student in Paris, 1903; A. M., Harvard University, 1904; Austin Teaching Fellow, *ibid.*, 1905-1906; Ph. D., *ibid.*, 1906; Student in Spain and Italy, 1906; Assistant Professor of Romance Languages, University of Missouri, 1906-1909; Professor of Romance Languages, University of North Carolina, 1909—
- MARVIN HENDRIX STACY, A. M., Professor of Civil Engineering.
Ph. B., University of North Carolina, 1902; Instructor in Mathematics, *ibid.*, 1902-1906; A. M., *ibid.*, 1904; Student, Cornell University, 1905, 1906, 1911; Associate Professor of Civil Engineering, University of North Carolina, 1906-1910; Professor of Civil Engineering, *ibid.*, 1910—; Acting Dean of the College of Liberal Arts, *ibid.*, 1913-1914; Dean of the College of Liberal Arts, 1914—
- LUCIUS POLK MCGEEHEE, A. B., Professor of Law.
A. B., University of North Carolina, 1887; Student, School of Law, *ibid.*, 1890-1891; Professor of Law, *ibid.*, 1904-1909; Dean of the School of Law, *ibid.*, 1910—
- CHARLES WESLEY BAIN, M. A., LL. D., Professor of Greek.
Student, University of Virginia, 1883-1885; M. A., University of the South, 1895; Professor of Ancient Languages, University of South Carolina, 1898-1910; Professor of Greek, University of North Carolina, 1910—; LL. D., University of South Carolina, 1913.
- ATWELL CAMPBELL MCINTOSH, A. M., Professor of Law.
A. B., Davidson College, 1881; A. M., *ibid.*, 1887; Professor of Law, Trinity College (N. C.), 1904-1910; Professor of Law, University of North Carolina, 1910—
- HARRY WOODBURN CHASE, Ph. D., Professor of Psychology.
A. B., Dartmouth College, 1904; Teacher in the Groveland High School (Mass.), 1904-1908; A. M., Dartmouth College, 1908; Director of the Clinic for Subnormal Children, Clark University, 1909-1910; Ph. D., *ibid.*, 1910; Professor of Psychology, University of North Carolina, 1910—
- ALVIN SAWYER WHEELER, Ph. D., Professor of Organic Chemistry.
A. B., Beloit College, 1890; Student, University of Chicago, 1895; Student, Cornell University, 1897; A. M., Harvard University, 1897; Assistant in Chemistry, *ibid.*, 1897-1900; Ph. D., *ibid.*, 1900; Associate Professor of Chemistry, University of North Carolina, 1900—

1912; Professor of Organic Chemistry, *ibid.*, 1912—; Student, University of Berlin, University of Bonn, Swiss Federal Polytechnic, 1910-1911.

LOUIS ROUND WILSON, Ph. D., Professor of Library Administration.

A. B., University of North Carolina, 1899; Librarian, *ibid.*, 1901—; A. M., *ibid.*, 1902; Ph. D., *ibid.*, 1905; Associate Professor of Library Administration, *ibid.*, 1907-1912; Student, Columbia University, 1910; Professor of Library Administration, University of North Carolina 1912—; Director of the Bureau of Extension, *ibid.*, 1914—

PARKER HAYWARD DAGGETT, S. B., Professor of Electrical Engineering.

Assistant in Electrical Engineering, Harvard University, 1908-1909; S. B., *ibid.*, 1910; Acting Professor of Electrical Engineering, University of North Carolina, 1910; Associate Professor of Electrical Engineering, *ibid.*, 1910-1913; Professor of Electrical Engineering, *ibid.*, 1913—

JAMES MUNSIE BELL, Ph. D., Professor of Physical Chemistry.

B. A., University of Toronto, 1902; M. A., *ibid.*, 1905; Assistant in Chemistry, Cornell University, 1902-1903; Graduate Scholar in Chemistry, *ibid.*, 1903-1904; Sage Fellow in Chemistry, *ibid.*, 1904-1905; Ph. D., *ibid.*, 1905; Associate Professor of Physical Chemistry, University of North Carolina, 1910-1913; Professor of Physical Chemistry, *ibid.*, 1913—

EDWIN GREENLAW, Ph. D., Professor of English.

A. B., Northwestern University, 1897; A. M., *ibid.*, 1898; A. M., Harvard University, 1903; Ph. D., *ibid.*, 1904; Instructor in English, Northwestern University, 1898-1902, 1904-1905; Instructor in English, University of Chicago, 1904, 1907; Professor of English, Adelphi College, 1905-1913; Professor of English, University of North Carolina, 1913—

LESTER ALONZO WILLIAMS, A. M., Pd. D., Professor of School Administration.

A. B., Dartmouth College, 1903; A. M., New York University, 1909; Pd. D., *ibid.*, 1912; Supervisor of Schools and Principal of High Schools in Massachusetts and New Hampshire, 1903-1912; Supervising Principal, Leonia, N. J., 1913; Lecturer, Brooklyn Institute of Arts and Sciences, 1913; Professor of School Administration, University of North Carolina, 1913—

JAMES BELL BULLITT, A. M., M. D., Professor of Histology and Pathology.

A. B., Washington and Lee University, 1894; A. M., *ibid.*, 1895; M. D., University of Virginia, 1897; Demonstrator of Anatomy, *ibid.*, 1898-1903; Professor of Anatomy and Pathology, University of Mississippi, 1903-1913; Professor of Histology and Pathology, University of North Carolina, 1913—

EUGENE CUNNINGHAM BRANSON, A. M., Professor of Rural Economics and Sociology.

A. M., Trinity College (N. C.), 1894; A. M., Peabody Normal College (Tenn.), 1899; President, State Normal School, 1900-1912; Professor of Rural Economics and Sociology, *ibid.*, 1912-1914; Professor of Rural Economics and Sociology, University of North Carolina, 1914—

ZEBULON VANCE JUDD, A. M., Professor of Rural Education.

Ph. B., University of North Carolina, 1903; Assistant in French, *ibid.*, 1903; Instructor in French, University of Florida, 1903-1905; Superintendent of Public Instruction, Wake Co., N. C., 1905—; Graduate Student, Columbia University, summers of 1909-1913, 1913-1914; A. M., *ibid.*, 1914; Professor of Rural Education, University of North Carolina, 1914—

THOMAS JAMES WILSON, JR., Ph. D., Associate Professor of Latin.

A. B., University of North Carolina, 1894; A. M., *ibid.*, 1896; Ph. D., *ibid.*, 1898; Instructor in Latin and Greek, *ibid.*, 1899-1901; Instructor in Latin, *ibid.*, 1901-1902; Student, University of Chicago, 1903, 1906; Associate Professor of Latin, University of North Carolina, 1902—; Registrar, *ibid.*, 1908—

WILLIAM STANLY BERNARD, A. M., Associate Professor of Greek.

Student, Episcopal Theological Seminary (Va.), 1893-1895; A. B., University of North Carolina, 1900; Librarian, *ibid.*, 1900-1901; Instructor in Greek, *ibid.*, 1901-1906; A. M., *ibid.*, 1904; Associate Professor of Greek, *ibid.*, 1906—; Student, University of Chicago, 1906, Columbia University, 1909, 1910, 1911.

ROBERT BAKER LAWSON, M. D., Associate Professor of Anatomy.

Student, University of North Carolina, 1897-1900; M. D., University of Maryland, 1902; Instructor in Anatomy, University of North Carolina, 1905-1906; Demonstrator in Anatomy, *ibid.*, 1906-1908; Associate Professor of Anatomy, *ibid.*, 1908.

GEORGE MCFARLAND MCKIE, A. M., Associate Professor of Public Speaking.

Graduate, Emerson College of Oratory, 1898; A. B., A. M., University of North Carolina, 1907; Student, Harvard University, 1907-1908; Instructor in English, University of North Carolina, 1899-1908; Associate Professor of Public Speaking, *ibid.*, 1908—

JOHN MANNING BOOKER, Ph. D., Associate Professor of English. A. B., Johns Hopkins University, 1901; Student, *ibid.*, 1901-1903, 1905-1909; Student, University of Munich, 1904-1905; Student, University of Heidelberg, 1903-1904, 1905, 1909, 1910, 1911; Ph. D., *ibid.*, 1912; Associate Professor of English, University of North Carolina, 1909—

OLIVER TOWLES, Ph. D., Associate Professor of the Romance Languages.

A. B., University of Virginia, 1906; Student, Johns Hopkins University, 1906-1909; Student in France, 1908; Ph. D., Johns Hopkins University, 1912; Associate Professor of Romance Languages, University of North Carolina, 1909—

THOMAS FELIX HICKERSON, A. M., S. B., Associate Professor of Civil Engineering.

Ph. B., University of North Carolina, 1904; Instructor in Mathematics, *ibid.*, 1905-1908; A. M., *ibid.*, 1907; S. B., Massachusetts Institute of Technology, 1909; Associate Professor of Civil Engineering, University of North Carolina, 1910—

KENT JAMES BROWN, Ph. D., Associate Professor of German.

A. B., Dickson College, 1901; Ph. D., University of Pennsylvania, 1905; Student, University of Berlin, 1904-1905; Student, University of Munich, 1909-1911; Assistant in German, University of Pennsylvania, 1902-1904; Instructor in German, State University of Iowa, 1911-1912; Associate Professor of German, University of North Carolina, 1912—

NORMAN FOERSTER, A. M., Associate Professor of English.

A. B., Harvard University, 1910; Instructor in English, Harvard Summer School, 1910, 1913; Student, Harvard University, 1910-1911; Instructor in English, University of Wisconsin, 1911-1914; A. M., *ibid.*, 1912; Associate Professor of English, University of North Carolina, 1914—

JAMES HOLLY HANFORD, Ph. D., Associate Professor of English.

A. B., University of Rochester, 1904; Ph. D., Harvard University, 1909; Assistant in English, *ibid.*, 1908; Instructor in English, *ibid.*,

1910-1913; Assistant Professor of English, Simmons College, 1909-1914; Associate Professor of English, University of North Carolina, 1914—

ROBERT LANE JAMES, C. E., Assistant Professor of Drawing.

Student in France, 1907-1908; C. E., Cornell University, 1912; Assistant Professor of Drawing, University of North Carolina, 1913—

ORESTES PEARLE REIN, Ph. D., Assistant Professor of German.

A. B., Lenoir College, 1907; A. B., University of North Carolina, 1908; Assistant in German, *ibid.*, 1908-1909; A. M., *ibid.*, 1909; Fellow, Johns Hopkins University, 1911-1913; Ph. D., *ibid.*, 1913; Assistant Professor of German, University of North Carolina, 1913—

GEORGE KENNETH GRANT HENRY, Ph. D., Assistant Professor of Latin.

A. B., Hamilton College, 1900; A. M., *ibid.*, 1904; Instructor in Mathematics, University of North Carolina, 1908-1909; Instructor in Latin, *ibid.*, 1909-1914; Ph. D., *ibid.*, 1914; Assistant Professor of Latin, *ibid.*, 1914—

JOHN GROVER BEARD, Ph. G., Assistant Professor of Pharmacy.

Assistant in Pharmacy, University of North Carolina, 1908-1909; Ph. G., *ibid.*, 1909; Instructor in Pharmacy, *ibid.*, 1909-1914; Assistant Professor of Pharmacy, *ibid.*, 1914—

VIVIAN LEROY CHRISLER, A. M., Instructor in Physics.

A. B., Piedmont College, 1902; Assistant in Physics, University of Nebraska, 1906-1909; B. S., *ibid.*, 1908; A. M., *ibid.*, 1909; Instructor in Science and Mathematics, Piedmont College, 1909-1910; Instructor in Physics, University of North Carolina, 1910—

JOHN WAYNE LASLEY, A. M., Instructor in Mathematics.

A. B., University of North Carolina, 1910; Fellow in Mathematics, *ibid.*, 1910-1911; A. M., *ibid.*, 1911; Instructor in Mathematics, *ibid.*, 1911—

WILBUR HIGH ROYSTER, A. M., Instructor in Latin.

A. B., University of North Carolina, 1907; Student, Johns Hopkins University, 1907-1908; Student, American School of Classical Studies Athens, Greece, 1908-1909; Student, Harvard University, 1909-1912; A. M., *ibid.*, 1911; Instructor in Latin, University of North Carolina, 1912—

WESLEY CRITZ GEORGE, A. M., Instructor in Zoology.

A. B., University of North Carolina, 1911; A. M., *ibid.*, 1912; Instructor in Zoology, University of North Carolina, 1912—

EUGENE FRED PARKER, A. M., Instructor in the Romance Languages.

B. S., Norwich University, 1907; A. M., Harvard University, 1909; Instructor in the Romance Languages, Union College, 1909-1911; Instructor in the Romance Languages, University of North Carolina, 1912—

JOHN ELIPHALET SMITH, M. S., Instructor in Geology.

B. S., Oregon Agricultural College, 1902; Student, University of Chicago, 1908, 1909, 1910; M. S., Iowa State College, 1911; Graduate Student and Curators' Fellow, University of Missouri, 1911-1912; Assistant in Botany, Kansas State College, 1908-1910; Instructor in Geology, University of North Carolina, 1912—

WILLIAM LEWIS JEFFRIES, A. M., Instructor in Chemistry.

A. B., University of North Carolina, 1910; Assistant in Chemistry, *ibid.*, 1910-1911; Fellow in Chemistry, *ibid.*, 1911-1913; A. M., *ibid.*, 1912; Instructor in Chemistry, *ibid.*, 1913—

HUBERT WALTER COLLINS, S. B., Instructor in Mathematics.

Assistant in Civil Engineering, University of North Carolina, 1913-1914; S. B., *ibid.*, 1914; Instructor in Mathematics, *ibid.*, 1914—

FRANK PORTER GRAHAM, A. B., Instructor in History.

A. B., University of North Carolina, 1909; Graduate Student, *ibid.*, 1909-1910, 1912-1913; Instructor in History *ibid.*, 1914—

HENRY ROLAND TOTTEN, A. M., Instructor in Botany.

A. B., University of North Carolina, 1913; Assistant in Botany, *ibid.*, 1913-1914; A. M., *ibid.*, 1914; Instructor in Botany, *ibid.*, 1914.

HENRY MCCUNE DARGAN, Ph. D., Instructor in English.

A. B., Mercer University, 1910; Student, University of California, 1910-1911; Student, University of Chicago, 1911; A. M., Harvard University, 1912; Ph. D., *ibid.*, 1914; Instructor in English, University of North Carolina, 1914—

RICHARD HURT THORNTON, A. M., Instructor in English.

A. B., Virginia Christian College, 1907; Graduate Student, Columbia University, 1911-1914; A. M., *ibid.*, 1914; Instructor in English, University of North Carolina, 1914—

CARNIE BLAKE CARTER, S. M., LeDoux Fellow in Chemistry.
VICTOR ALDINE COULTER, S. M., Fellow in Technical Chemistry.
VICTOR CLYDE EDWARDS, A. B., Fellow in Organic Chemistry.
JOHN WESLEY MCIVER, S. B., Fellow in Electrical Engineering.
JOHN MELVILLE HUFF, Assistant in Anatomy.
CLEVELAND FANE KIRKPATRICK, A. B., Assistant in Bacteriology.
LUCIUS COLEMAN HALL, Assistant in Chemistry.
OSCAR ASA PICKETT, Assistant in Chemistry.
WILLIAM NELSON PRITCHARD, JR., Assistant in Chemistry.
MALCOLM NORVEL OATES, S. B., Assistant in Electrical Engineering.
ARNOLD ARTEMUS MCKAY, A. B., Assistant in English.
DANIEL LAMONT SECKINGER, A. B., Assistant in English.
ALLYN RAYMOND BROWNSON, A. B., Assistant in Geology.
BASCOM LEE FEILD, Assistant in Geology.
HARRY LYNDON BROCKMANN, Assistant in Histology.
WALTON STALEY WICKER, A. B., Assistant in Mathematics.
WILSON WILLIAM ALLEN, Assistant in Pharmacy.
RICHARD HOMER ANDREWS, Ph. G., Assistant in Pharmacy.
GEORGE WALLACE SMITH, Assistant in Physics.
VANN WARD MCGEE, Assistant in Physics.
LEE HENRY EDWARDS, Assistant in Physics.
WILLIAM RANEY STANFORD, Assistant in Zoology.
ADAM TREDWELL THORP, Assistant in Zoology.

FACULTY COMMITTEES

The President is a member *ex officio* of all committees.

ADVISORY (*elected*). Professors Coker, Howe, McGehee, Stacy, Wilson, H. V.

EXECUTIVE (*elected*). Professors Stacy, Bain, Patterson, Wagstaff.

ADVANCED STANDING. Professors Wilson, T. J., Howe, Chase, Daggett.

ATHLETICS. Professors Herty, Mangum, Henderson, Howell, Winston, Brown, K. J.

AUDITING. Professors Cain, Toy.

ALUMNI ORGANIZATIONS. Mr. Rankin, Professors Bernard, Hamilton.

CATALOGUE. Professors Howe, Bain, Daggett.

CHAPEL. Professors Patterson, Stacy.

CLASS REUNIONS. Professor Bernard.

COMMONS. Professors Toy, McKie, Wheeler.

COURSES OF STUDY. Professors Stacy, Bain, Howe, Patterson.

CURRICULUM. Professors Howe, Chase, Coker, Dey, Stacy, Wilson, T. J.

DEBATES. Professors Williams, H. H., Raper, Bernard, Greenlaw.

DRAMATICS. Professors McKie, Howe, Messrs. Dargan, Thornton.

ENTRANCE CERTIFICATES. Professors Daggett, Hamilton, Walker, Williams, L. A.

ENTRANCE CONDITIONS. Professors Bain, Daggett, Foerster.

GRADUATE SCHOOL. Professors Raper, Chase, Greenlaw.

GROUNDS AND BUILDINGS. Professors Coker, Cobb, Wheeler.

LIBRARY. Professors Raper, Coker, Dey, Greenlaw.

LIBRARY APPROPRIATIONS. Professors Raper, Wilson, H. V.

McNAIR LECTURES. Professors Herty, Coker, Henderson, Williams, H. H.

PRESS ASSOCIATION. Professor Wilson, L. R.

PUBLICATIONS. Professors Wilson, L. R., Hamilton, Coker, Hanford.

PUBLIC LECTURES. Professors Henderson, Bain, McGehee, MacNider, Coker.

PUBLIC OCCASION, AND CELEBRATIONS. Professors Henderson, Pratt, Hamilton, Patterson, Wheeler, Howe.

SCHEDULES. Professors Wilson, T. J., Stacy.

SELF-HELP. Professors Bell, Wheeler, Hickerson.

STUDENT LIFE AND ACTIVITIES. Professors Booker, Bernard, Wheeler, Winston, Wagstaff.

UNIVERSITY EXTENSION. Professors Wilson, L. R., Patterson, Noble, Raper, Cobb, Stacy, Chase, Williams, L. A., Branson, Judd, Walker, Mr. Rankin.

UNIVERSITY MAGAZINE. Professors Cobb, Booker, Foerster.

UNIVERSITY SERMONS. Professors Toy, Raper, McKie.

PART TWO

THE COLLEGE OF LIBERAL ARTS
THE SCHOOL OF APPLIED SCIENCE
THE SCHOOL OF EDUCATION
THE GRADUATE SCHOOL

THE COLLEGE OF LIBERAL ARTS

There are three courses of instruction outlined in The College of Liberal Arts. The object of these courses is to provide a general, well-rounded, liberal education. The first two years of each allow but little election of studies. Beginning with the Junior year the election is wider, and a student can devote himself, to a large extent, to such special lines of study as he may prefer, although there are certain general restrictions designed to guard against too narrow a specialization. The first course, requiring both Greek and Latin, corresponds to the old classical course. The second course is a combination of ancient and modern languages and science. The third course is largely scientific. All of these courses lead to the one degree of Bachelor of Arts, and they are so balanced as to make the work equally difficult and worthy.

ADMISSION

Admission Into the Freshman Class

Candidates for admission into the Freshman Class are received by examination or by certificates from accredited schools.

Entrance examinations are held in September. Arrangements have been made with certain schools in the State whereby examinations for admission may be held in May, also, at the schools. The University will accept the uniform entrance examination papers of the Association of Colleges and Preparatory Schools of the Southern States, provided such papers are properly vouched for and sent sealed to the University for grading. Candidates for admission by examination must report at 9 A. M., *Monday, September 6, 1915*, to the Registrar, who will appoint time and place for examination.

Students who present certificates of work accomplished at preparatory schools and colleges may be admitted without examination, provided the certificates are approved. The right to examine, however, is reserved, when such a course is deemed necessary. Certificates must be made out on the printed forms furnished on application to the Registrar, and should be sent in as early as possible in the summer vacation. They must be submitted for approval to the Committee on Entrance Certificates

in the Alumni Building during the period of registration (*September 6, 7, 8, 1915*).

Subjects Accepted for Entrance

The complete list of subjects accepted for entrance is as follows:

*English <i>a, b, c</i> , ...	3. units
History <i>a, b, c</i> , ...	3. units
Mathematics <i>a, b, c, d</i> , ...	3.5 units
Greek <i>a, b, c</i> , ...	3. units
Latin <i>a, b, c, d, e</i> , ...	4.7 units
French <i>a, b</i> , ...	3. units
German <i>a, b</i> , ...	3. units
Spanish, ...	2. units
Botany, ...	1. unit
Chemistry, ...	1. unit
Physics, ...	1. unit
Zoology, ...	1. unit
Drawing, ...	1. unit
Civics, ...	.5 unit
Physiography	.5 unit
Physiology, ...	.5 unit

It will be noticed that each subject has a valuation by units. A unit means a definite amount of a subject satisfactorily completed in a reasonable length of time. For example, one unit in History means the satisfactory completion of a standard text book in English or United States History in a period of study continuing through an entire High School session; one-half unit in Solid Geometry means the completion of the four books of Solid Geometry in about one-half a session; the fourteen units mentioned below correspond to the four years of work in a good High School.

Unconditioned entrance to the undergraduate departments of the University requires a total of 14 units selected from the list above. A candidate, however, who desires to pursue any one of the regular courses leading to a Bachelor's degree must make his selection from the list of accepted subjects accord with the course to be pursued after entrance. Thus, the undergraduate course

* For specific requirements in each of the subjects in this list, see page 34.

requiring Greek, Latin, Mathematics, and English necessitates the selection on the part of the candidate of a specified number of units in each of these branches (see below). The same is true, also, of entrance to all other courses.

The following tables indicate the requirements for entrance to each of the three courses leading to the degree of Bachelor of Arts (see page 39).

For entrance to group 1:

English <i>a</i> , <i>b</i> , and <i>c</i> , ...	3. units
History <i>a</i> or <i>b</i> , ...	2. units
Mathematics <i>a</i> , <i>b</i> , and <i>c</i> , ...	3. units
Greek <i>a</i> and <i>b</i> , ...	2. units
Latin <i>a</i> , <i>b</i> , <i>c</i> , and <i>d</i> , ...	3.7 units
Elective	.3 unit

For entrance to group 2:

English <i>a</i> , <i>b</i> , and <i>c</i> , ...	3. units
History <i>a</i> or <i>b</i> , ...	2. units
Mathematics <i>a</i> , <i>b</i> , and <i>c</i> , ...	3. units
Latin <i>a</i> , <i>b</i> , <i>c</i> , and <i>d</i> , ...	3.7 units
French <i>a</i> or German <i>a</i> , ...	2. units
Elective	.3 unit

For entrance to group 3:

English <i>a</i> , <i>b</i> , and <i>c</i> , ...	3. units
History <i>a</i> or <i>b</i> , ...	2. units
Mathematics <i>a</i> , <i>b</i> , and <i>c</i> , ...	3. units
French <i>a</i> , ...	2. units
German <i>a</i> , ...	2. units
Science	1. unit
Elective	1. unit

At the discretion of the Committee on Entrance Certificates candidates may be admitted with conditions, provided the total number of units offered does not fall below the minimum of 12 units, and provided the conditions are of such nature that, in the judgment of the Committee, they may be removed according to the regulations given in the next paragraph. The Committee has the discretionary power to admit certain candidates whose credits fall below 12 units, if, in the opinion of the Committee,

the maturity of the candidate, who must be at least twenty-one years of age, justifies such action. Candidates thus admitted will be classed as special students.

Entrance conditions in any subject must be made up by September of the following year. A student who fails to comply with this regulation will not be allowed to register for any course in his Sophomore year.

The requirements in each of the subjects accepted for entrance are as follows:

ENGLISH: (1913-1915) (a) Grammar and Rhetoric.. 1. unit
(b) Reading and Practice 1. unit

Two from each of the following groups:—

- A. 1. Selections from the *Old Testament* (the chief narrative episodes in *Genesis*, *Exodus*, *Joshua*, *Judges*, *Samuel*, *Kings*, and *Daniel*, and the books of *Ruth* and *Esther*); 2. the *Odyssey*, (English translation), (Books I, II, III, IV, V, XV, XVI, XVII may be omitted); 3. the *Iliad*, (English translation), (Books XI, XIII, XIV, XV, XVII, XXI may be omitted); 4. Virgil's *Aeneid* (English translation).
A unit from any other group may be substituted for any unit in this group.
- B. 1. Shakspeare's *The Merchant of Venice*; 2. *A Midsummer Night's Dream*; 3. *As You Like It*; 4. *Twelfth Night*; 5. *Henry the Fifth*; 6. *Julius Caesar*.
- C. 1. Defoe's *Robinson Crusoe*, (Part I); 2. Goldsmith's *The Vicar of Wakefield*; 3. either Scott's *Ivanhoe* or *Quentin Durward*; 4. Hawthorne's *The House of Seven Gables*; 5. either Dickens's *David Copperfield* or *A Tale of Two Cities*; 6. Thackeray's *Henry Esmond*; 7. Mrs. Gaskell's *Cranford*; 8. George Eliot's *Silas Marner*; 9. Stevenson's *Treasure Island*.
- D. 1. Bunyan's *The Pilgrim's Progress*, (Part I); 2. *The Sir Roger de Coverley Papers* in *The Spectator*; 3. Franklin's *Autobiography*; 4. Irving's *Sketch Book*; 5. Macaulay's *Essays on Lord Clive and Warren Hastings*; 6. Thackeray's *English Humorists*; 7. Selections from Lincoln (including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the last public Address, and Letter to Horace Greeley) along with a brief memoir or estimate; 8. Parkman's *The Oregon Trail*; 9. Either Thoreau's *Walden*, or Huxley's *Autobiography* and selec-

tions from *Lay Sermons*, including the addresses on *Improving Natural Knowledge*, *A Liberal Education*, and *A Piece of Chalk*;
10. Stevenson's *An Inland Voyage* and *Travels with a Donkey*.

- E. 1. Palgrave's *Golden Treasury*, (First Series), Books II and III with especial attention to Dryden, Collins, Gray, Cowper, and Burns; 2. Gray's *An Elegy in a Country Churchyard* and Goldsmith's *The Deserted Village*; 3. Coleridge's *The Rime of the Ancient Mariner* and Lowell's *The Vision of Sir Launfal*; 4. Scott's *The Lady of the Lake*; 5. Byron's *Childe Harold*, Canto IV, and *The Prisoner of Chillon*; 6. Palgrave's *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; 7. Poe's *The Raven*, Longfellow's *The Courtship of Miles Standish*, and Whittier's *Snow-bound*; 8. Macaulay's *Lays of Ancient Rome* and Arnold's *Shorab* and *Rustum*; 9. Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur*; 10. Browning's *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City*.

The candidate is expected to have sufficient knowledge of these books to enable him to answer general questions on their substance. The form of the examination will be the composition of paragraphs on a number of topics connected with the work. The ability of the candidate to express his ideas in clear, accurate English is a main consideration. No applicant should present himself who is notably deficient in spelling, grammar, or paragraphing.

(c) Study and Practice 1. unit

Shakspeare's *Macbeth*; Milton's *L'Allegro*, *Il Penseroso*, and *Comus*; Burke's *Speech on Conciliation with America*, or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration*; Macaulay's *Life of Johnson*, or Carlyle's *Essay on Burns*.

The question on these books will be on subject matter and structure.

HISTORY: (a) The histories of the United States, Greece, and Rome, as outlined in the best text books for high schools 2. units

(b) The histories of the United States and England as

outlined in the best text books for high schools, 2 units

(c) Mediæval History 1. unit

MATHEMATICS: (a) Algebra 1.5 units

The whole of a high school algebra including quadratic equations, binomial theorem, and progressions.

(b) The whole of Plane Geometry..... 1. unit

(c) The whole of Solid Geometry..... .5 units

(d) Trigonometry 5 unit

Plane trigonometry and spherical trigonometry through right triangles.

GREEK: (a) Grammar and Composition 1. unit

Acquaintance with the more usual forms and constructions; simple narrative in English, based upon Xenophon's Anabasis, to be translated into Greek.

(b) Xenophon 1. unit

The first four books of the Anabasis.

(c) Homer 1. unit

The first three books of the Iliad, (omitting II., 494—end), with study of Homeric forms, constructions, and prosody.

LATIN: (a) Grammar and Composition 1. unit

Forms, syntax, and prosody; simple narrative in English, based upon the prose read, to be translated into Latin.

(b) Cæsar 1. unit

The first four books of the Gallic War.

(c) Cicero 7 units

The four orations against Catiline.

(d) Vergil 1. unit

The first six books of the Æneid, study of hexameter verse.

(e) Cornelius Nepos 1. unit

The first fifteen lives.

FRENCH: (a) Elementary 2. units

The forms and uses of the various parts of speech, in-

cluding irregular verbs; translation of 250 or more pages of easy prose into idiomatic English; translation of simple English sentences into French; pronunciation.

(b) Intermediate 1. unit

Translation of 400 or more pages of French of ordinary difficulty.

GERMAN: (a) Elementary 2. units

Inflection, including the most common irregular verbs; the ordinary laws of German syntax; translation of 200 or more pages of easy German into idiomatic English; translation of simple English sentences, based upon passages read, into German.

(b) Intermediate 1. unit

Translation of 400 or more pages of German of ordinary difficulty.

SPANISH: Elementary 2. units

Inflection, including the most common irregular verbs; ordinary laws of syntax; translation of 250 pages or more of easy Spanish into idiomatic English; translation of simple English sentences, based upon the passages read, into Spanish.

BOTANY: 1. unit

A course such as is contained in any standard text book; laboratory work.

CHEMISTRY: 1. unit

A course such as is contained in any standard text book; laboratory work.

PHYSICS: 1. unit

A course such as is contained in Millikan and Gale's Physics or Carhart and Chute's High School Physics; laboratory work such as is outlined in Millikan and Gale's Physics.

PHYSIOGRAPHY: 5 unit

A course such as is contained in any standard text book.

- PHYSIOLOGY: 5 unit
 A course such as is contained in any standard text book.
- ZOOLOGY: 1. unit
 A year's course such as is contained in any standard text book.
- CIVICS: 5 unit
 A course such as is contained in any standard text book.
- DRAWING: 1. unit
 A year's work, including simple geometrical plane and solid figures, simple pieces of machinery; elementary rules of perspective, light, and shade, as applied in freehand sketching.

Admission to Advanced Standing

A candidate for advanced standing may be admitted to the Sophomore, Junior, or Senior Class, with or without complete examination. He is subject not only to the examinations required of candidates for admission into the Freshman Class, but to special examinations both in all the required studies already pursued by the class which he desires to enter, and in as many elective studies as would have been required of him as a member of that class. When satisfied with the apparent fitness of the candidate, the examining committee may, in spite of his deficiencies in some studies, admit him to an advanced class; but a candidate so admitted is not recommended for the degree until the deficiencies are made good. The examining committee may accept, also, with proper restrictions, the official report of work satisfactorily completed at a college or university of good standing in place of an examination upon such previous work.

A candidate for advanced standing should present himself for examination on the same days and at the same hours as candidates for admission into the Freshman Class.

CURRICULUM

COURSES LEADING TO THE DEGREE OF BACHELOR OF ARTS

In order to be recommended for the degree of Bachelor of Arts, the student must have passed satisfactory examinations in all the studies required in one of the groups prescribed for the Freshman and Sophomore years, and in a number of elective studies during the Junior and Senior years sufficient to amount to an average of fifteen hours of lectures or recitations a week for each of these years. Students who expect at some time to carry out investigation in any science or scientific profession, such as medicine or engineering, are earnestly recommended to enter upon their Senior year with a reading knowledge of German and French. Class work in these subjects should have included at least two courses in German and one in French.

The group of studies selected for the Freshman and Sophomore years must correspond to the group of subjects offered for entrance.

Freshman Year

Group 1.		Group 2.		Group 3.	
English 1-2(3)*		English 1-2(3)		English 1-2(3)	
Mathematics 1-2(4)		Mathematics 1-2(4)		Mathematics 1-2(4)	
Greek 1-2(4)	Select	Greek 1-2(4)		German 1-2(3)	
Latin 1-2(4)	one	Latin 1-2(4)		Chemistry 1-2(3)	
English 11-12(1)	Select	German 1-2(3)		History 1-2(3)	
	one	French 1-2(3)		English 11-12(1)	
		History 1-2(3)			
		English 11-12(1)			

Sophomore Year

Group 1.		Group 2.		Group 3.	
Select	English 3-4(3)	English 3-4(3)		Select	English 3-4(3)
one	Greek 3-4(3)	Greek 3-4(3)		one	Math. 3-4(3)
	Latin 3-4(3)	Latin 3-4(3)			German 21-22(3)†
Select	Greek 3-4(3)	Select	German 1-2(3)		French 1-2(3)
one	Latin 3-4(3)	two	French 1-2(3)		Physics 1-2(3)
	German 1-2(3)		German 21-22(3)†		Elective (3)
	French 1-2(3)		French 3-4(3)		
Select	Math. 3-4(3)	Select	Math. 3-4(3)		
one	Chem. 1-2(3)	one	Physics 1-2(3)		
	Physics 1-2(3)		Elective (3)		
	Elective (3)				

* Numerals in parentheses indicate the number of hours a week.

† German 23-24 or 25-26 may be substituted.

SOPHOMORE ELECTIVES: Greek 3-4 (3), Latin 3-4 (3), German 1-2 (3), French 1-2 (3), History 3-4 (3), History 15-16 (3), Botany 1-2 (3), Chemistry 1-2 (3), Geology 1-2 (3), Mathematics 3-4 (3), Physics 1-2 (3), Zoology 1-2 (3).

Sophomores should choose their elective, if possible, with a view to the later choice of a department for concentrated study in Junior and Senior years.

The selection made must in each case be submitted to Professor Bain for approval.

Not later than May 15 Sophomores shall hand in to the Registrar a list of electives for Junior year, specifying the department chosen for concentrated study and the particular courses in this and other departments. This list must have the written approval of the head of the chosen department before it will be accepted by the Registrar.

SYSTEM OF ELECTIVES

For the purpose of providing what is deemed a proper amount of concentration in study and at the same time of requiring a certain distribution of subjects, the various departments of the College are grouped under three general divisions as follows:

Division I. Language and Literature.

Department of English.

Department of German.

Department of Greek.

Department of Latin.

Department of Romance Languages.

Division II. Philosophy, Political and Social Sciences.

Department of Economics.

Department of Rural Economics and Sociology.

Department of Education.

Department of History.

Department of Philosophy.

Division III. Mathematics, Natural Sciences.

Department of Botany.

Department of Chemistry.

Department of Electrical Engineering.

Department of Geology.
Department of Mathematics.
Department of Physics.
Department of Zoology.

Junior Year

A Junior shall pursue elective studies amounting to fifteen hours a week, chosen according to the following regulations.

One department must be selected for concentrated study from one of the three general divisions. Not less than six hours nor more than nine hours may be elected in this department. The courses and the number of hours are to be decided upon only after consultation with the head of the department. It lies within the discretion of the head of the department to prescribe courses in allied departments in addition to those prescribed in his own, provided the maximum of nine hours is not exceeded. The Sophomore elective, completed the previous year, may be counted by the head of the department as one of the courses necessary for the minimum of six hours; but in that case an additional elective (chosen from any department) must be taken to complete the general requirement of fifteen hours.

The remaining hours (six to nine) are free electives, subject only to the restriction that at least one course must be chosen from a department in each of the other general divisions. One of these two courses should be selected with a view to a continuance of the same subject through Senior year (see Senior requirement).

The remaining hours, if any, shall be free electives in any subject open to Juniors.

At registration in September the complete list of electives must be submitted to Professor Patterson for approval.

Senior Year

A Senior shall pursue elective studies amounting to fifteen hours a week, chosen according to the following regulations.

A Senior shall continue in the department of concentrated study begun in Junior year. Not less than six hours nor more than nine hours may be elected in this department. The courses and the number of hours are to be decided upon only after consultation with the head of the department. It lies within the discre-

tion of the head of the department to prescribe courses in allied departments in addition to those prescribed in his own, provided the maximum of nine hours is not exceeded.

The remaining hours (six to nine) are free electives, except that at least one course must be chosen from one of the other general divisions and in a department in which a course was elected in Junior year.

At registration in September the complete list of electives must be submitted to Professor Howe for approval.

COURSES OF INSTRUCTION

DEPARTMENT OF BOTANY

WILLIAM CHAMBERS COKER, Ph. D., *Professor of Botany.*

HENRY ROLAND TOTTEN, A. B., *Instructor in Botany.*

[For description of Biological Laboratories, see page 249.]

1-2. General Botany: an introduction to the structure and classification of plants; lectures with laboratory work. Sophomore, Junior, and Senior elective. *Both terms, three hours.* Professor COKER and Mr. TOTTEN.

3-4. Physiology: a general course in plant physiology; lectures with laboratory and field experiments. Junior and Senior elective. *Both terms, three hours.* Professor COKER and Mr. TOTTEN.

5-6. Special Morphology of the Algæ and Fungi, with attention to the culture of lower fungi, and the identification of mushrooms; lectures with laboratory and field work. Junior and Senior elective. *Both terms, three hours.* Professor COKER and Mr. TOTTEN.

For Course 7-8, see Graduate School.

DEPARTMENT OF CHEMISTRY

CHARLES HOLMES HERTY, Ph. D., *Smith Professor of General and Industrial Chemistry.*

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., *Francis Preston Venable Professor of Chemistry.*

ALVIN SAWYER WHEELER, Ph. D., *Professor of Organic Chemistry.*

JAMES MUNSIE BELL, Ph. D., *Professor of Physical Chemistry.*

WILLIAM LEWIS JEFFRIES, A. M., *Instructor in Chemistry.*

CARNIE BLAKE CARTER, M. S., *LeDoux Fellow in Chemistry.*

VICTOR ALDINE COULTER, M. S., *Fellow in Chemistry.*

VICTOR CLYDE EDWARDS, A. B., *Fellow in Organic Chemistry.*

LUCIUS COLEMAN HALL, *Assistant in Chemistry.*

OSCAR ASA PICKETT, *Assistant in Chemistry.*

WILLIAM NELSON PRITCHARD, *Assistant in Chemistry.*

[For description of Chemical Laboratories, see page 247.]

1-2. General Descriptive Chemistry: a study of the elements and their compounds, including an introduction to Organic Chemistry; lectures with laboratory work. Students with Chemistry credits may take special laboratory work in inorganic preparations. Required of Freshmen in Group 3, Sophomore elective in Groups 1 and 2. *Both terms, three hours.* Professor VENABLE, and Messrs. JEFFRIES and HALL.

Laboratory fee, \$2.50 a term.

8. Inorganic Chemistry: a detailed study of the reactions of the elements and their compounds. Lectures and text books. Junior and Senior elective; prerequisite, Chemistry 41-42. *Spring term, three hours.* Professor HERTY.

11-12. Industrial Chemistry: the methods and economics of chemical industries, with special reference to those industries utilizing the products of the Southern States. Junior and Senior elective; prerequisite, Chemistry 1-2. *Both terms, three hours.* Professor HERTY.

18. History of Chemistry; Senior elective; prerequisite, Chemistry 61-62 and 81-82. *Spring term, two hours.* Professor VENABLE.

31-32. Qualitative Analysis: laboratory work with lectures. Prerequisite, Chemistry 1-2. Junior and Senior elective. *Both terms, two hours.* PROFESSOR WHEELER and Mr. PRITCHARD.

Laboratory fee, \$5.00 a term.

41-42. Elementary Quantitative Analysis: laboratory work, lectures, and stoichiometric exercises; a grounding in analytical methods. Junior and Senior elective; prerequisite, Chemistry 1-2 and 31-32 or may be taken with 31-32. *Both terms, three hours.* Professor BELL.

Laboratory fee, \$7.50 a term.

45-46. Technical Quantitative Analysis: laboratory work. Extension of course 41-42 along technical lines. Senior elective; prerequisite, Chemistry 41-42. *Both terms, two hours.* Professor HERTY.

Laboratory fee, \$5.00 a term.

47-48. Gas Analysis, Assaying and Spectroscopic Analysis. Lectures and laboratory work. Senior elective; prerequisite Chemistry 41-42. *Both terms, one hour.* Professor BELL.

Laboratory fee, \$2.50 a term.

48-49. Technical Quantitative Analysis: laboratory work; extension of course 41-42 along technical lines; research. Senior elective; prerequisite, Chemistry 1-2, 31-32 and 41-42. *Both terms, five hours.* Professor HERTY.

Laboratory fee, \$10.00 a term.

61-62. Organic Chemistry: Junior and Senior elective; prerequisite, Chemistry 1-2 and 31-32. *Both terms, three hours.* Professor WHEELER.

Laboratory fee, \$4.00 a term.

63-64. Organic Chemistry: laboratory work including analysis of (a) pure organic compounds, (b) food products, (c) commercial dye stuffs. Senior elective; prerequisite, Chemistry 61-62. *Both terms, two hours.* Professor WHEELER.

Laboratory fee, \$6.00 a term.

81-82. Elementary Physical Chemistry: Junior and Senior elective; prerequisite, Chemistry 31-32 and 41-42. *Both terms, three hours.* Professor BELL.

Laboratory fee, \$2.50 a term.

83. Physical Chemistry: lectures and text books, with laboratory work. Senior elective; prerequisite, Chemistry 81-82. *Fall term, three hours.* Professor BELL.

Laboratory fee, \$2.50.

84. Electro-Chemistry: theory and application of electricity

to chemical processes. Senior elective; prerequisite, Chemistry 41-42. *Spring term, three hours.* Professor BELL.

Laboratory fee, \$2.50.

The Journal Club meets fortnightly. The current journals, American, English, German, and French, both the purely scientific and the technical, are reviewed by the students and instructors. Attendance is expected of students in advanced courses.

For courses 33 and 44, see School of Applied Science.

For courses 71-72 and 74, see School of Medicine and School of Pharmacy.

For courses 25-28, 75-78, 95-98, see Graduate School.

DEPARTMENT OF ECONOMICS AND FINANCE

CHARLES LEE RAPER, Ph. D., *Professor of Economics.*

1-2. General Economics: A general study of the principles which are involved in the production, distribution, and consumption of wealth, and in the relation of wealth to welfare; a special study of labor, land, capital, business management, and the state as factors in the production and distribution of wealth. Raper's *Principles of Wealth and Welfare*, and Seligman's *Principles of Economics*. Junior and Senior electives. *Both terms, three hours.* Professor RAPER.

3-4. Money, Banking, and Insurance: (a) A general study of the principles, functions, and forms of money and banking; a special study of current monetary problems. Lectures, readings, and reports. Johnson's *Money and Currency* (revised ed.) and Dunbar's *Theory and History of Banking*, (2nd ed.), and Jones' *Economic Crises*. (b) A general study of the principles and methods of insurance; a special study of the regulation of insurance by the state. Gephort's *Principles of Insurance*. Lectures and readings. Junior and Senior elective. *Both terms, three hours.* Professor RAPER.

9-10. Transportation and Labor: (a) A general study, from the historical and critical points of view, of railway transportation in such representative countries as Great Britain, France, Italy, Germany, and the United States; the general conditions of traffic, the passenger service and rates, the freight service and

rates, and the ideals and machinery of the state's relation receive special consideration. Lectures, readings, and reports. Raper's *Railway Transportation: a History of its Economics and of its Relation to the State*. (b) Labor as an agent in the production of wealth; wages; some wages problems, as, for instance, woman and child labor, immigration, sweating system, and poverty; some of the solutions of these problems, as, for instance, strikes, boycotts, trades unions, conciliation and arbitration, profit-sharing, co-operation, industrial education, and the factory acts; the relation of the state to wages problems. Adams and Sumner's *Labor Problems*. Junior and Senior electives. *Both terms, two hours.*

Given in alternate years; to be given in 1915-1916.

13-14. Public Finance: A general study of the principles which are involved in the revenues and expenditures of the state, and in the relation of the state to the industries of its citizens; a special study of taxation, local, state, national. Lectures, readings, and reports. Adams' *The Science of Finance*. Senior elective. *Both terms, two hours.* Professor RAPER.

Given in alternate years; to be omitted in 1915-1916.

15-16. Economic Institutions and Thought in England and the United States: A general study, largely from the historical point of view, of the economic institutions and the systems of economic thought in England and the United States; a special study of socialism. Lectures, readings, and reports. Cheyney's *Industrial and Social History of England*, Brooks' *The Social Unrest*, Spargo's *Socialism*, and the *Communist Manifesto* (Marx and Engels). Senior elective. *Both terms, two hours.* Professor RAPER.

A certificate is granted to the student who has completed, with credit, these courses.

DEPARTMENT OF APPLIED RURAL ECONOMICS AND SOCIOLOGY

EUGENE CUNNINGHAM BRANSON, A. M., *Professor of Rural Economics and Sociology.*

1-2. Formal Course in Rural Economics: a background for defining and interpreting the economic problems of country life

in North Carolina; Carver's *Principles of Rural Economics*. References: Taylor's *Agricultural Economics*, Hart's *The Southern South, Country Life* (American Academy of Social and Political Science). Junior and Senior elective. *Both terms, three hours.* Professor BRANSON.

5-6. Constructive Studies in Rural Sociology; Gillette's *Constructive Rural Sociology*. References: Fiske's *Challenge of the Country*, Wilson's *Evolution of the Country Community*, *The Georgia Club*, and *A Survey of Montgomery County, Md.* (Bulletins of the Federal Bureau of Education), *The Arkansas*, and *the Tennessee Survey*, issued by Dr. Warren H. Wilson. Junior and Senior elective. *Both terms, three hours.* Professor BRANSON.

9-10. Laboratory Course in Rural Economics and Sociology; home-county and home-state studies, researches, and surveys, by the County Clubs and the State Club at the University, and by correspondence with members of the extra-campus clubs in North Carolina. Junior and Senior elective. *Both terms, three hours.* Professor BRANSON.

The Club library and files are a clearinghouse of economic and social information about the State. The headquarters of the North Carolina Club are open to students of all classes and departments during the morning hours of every day, and on Monday, Wednesday and Friday afternoons, 3:30 to 6:00 o'clock. The North Carolina Club meets one hour fortnightly.

DEPARTMENT OF EDUCATION

MARCUS CICERO STEPHENS NOBLE, *Professor of Pedagogy and Dean of the School of Education.*

NATHAN WILSON WALKER, A. B., *Professor of Secondary Education and State Inspector of High Schools.*

HARRY WOODBURN CHASE, Ph. D., *Professor of Psychology.*

LOUIS ROUND WILSON, Ph. D., *Professor of Library Administration.*

LESTER ALONZO WILLIAMS, Pd. D., *Professor of School Administration.*

ZEBULON VANCE JUDD, A. M., *Professor of Rural Education.*

Only those courses are given below which are open to Academic students. For the complete list of courses in Education, with the requirements for the degree of Bachelor of Arts in Education, see the School of Education.

The Science and Practice of Education

3. Theory and Practice of Education. A study of the theory and practice of modern education from the view-point of both the teacher and the citizen; the selection of the material of instruction; the development and arrangement of the curriculum for the grammar school and High School. Lectures, text-books, and assigned readings. Junior and Senior elective. *Fall term, three hours.* Professor NOBLE.

7-8. Rural School Curricula. The content and organization of courses of study for country schools will constitute the considerations of this course. An effort will be made to formulate the chief sociological demands of country life and to mark out courses of study suitable to typical social and industrial situations. Concrete contributions of normal schools and schools of education in the leading colleges and universities and of specialists in education will be studied. Reports on firsthand investigations, and specimen curricula will be required. Graduate course, open to Seniors. *Both terms, two hours.* Professor JUDD.

See also course 51-52, which in the spring term is largely concerned with high school methods.

History of Education

22. The General History of Education. A brief general history of education; the development of educational theories in the past; the effect of the pedagogical doctrines of the great educators of the past upon modern educational systems. Lectures, textbooks, parallel readings, theses. Junior and Senior elective. *Spring term, three hours.* Professor NOBLE.

23-24. Current Education. A study of present educational tendencies and practice as seen in typical country and city school systems and in the development and supervision of the American public school of today. For teachers who wish to prepare for service as principals and superintendents. Lectures, text-books,

research, and theses. Junior and Senior elective. *Both terms, two hours.* Professor NOBLE.

25-26. Modern Educational Theorists: A comparative study of modern theories in education as revealed by writers on the topic from the Renaissance to the present time. Present problems in education will be studied in the light of their past. Lectures, discussions, reports. Junior and Senior elective. *Both terms, two hours.* Professor WILLIAMS.

27-28. American Education. A brief study of the more prominent State school systems; a comparative study of the purpose and progress of education in the different sections of the Union. Lectures, text-books, assigned readings, and theses. Graduate course, open to Seniors. *Both terms, two hours.* Professor NOBLE.

Educational Psychology

41-42. Introduction to Educational Psychology. This course will deal with the psychological principles which underly the learning process. Topics treated will be the nature and educational importance of instinct, habit formation, attention and interest, the acquisition of knowledge, attitudes, ideals, action, the emotional life. Lectures, readings, class exercises. Sophomore, Junior, and Senior elective. *Both terms, three hours.* Professor CHASE.

44. Laboratory course in Educational Psychology. The laboratory work will deal with such topics as habit formation, memory, economical methods of learning, the transfer of training, and some of the simpler mental tests, and will be supplemented by lectures. Junior and Senior elective. Open only to students who have completed the fall term of Education 41-42, or of Philosophy 1-2. *Spring term, three hours.* Professor CHASE.

Laboratory fee, \$2.00.

The attention of students in Educational Psychology is called to courses 1-2 (Introduction to Psychology) and 3-4 (Genetic Psychology) in the Department of Philosophy.

Educational Administration and Supervision

51-52. High School Organization and Administration: a study of the American high school, its evolution, organization,

administration, function, and problems. Special emphasis will be laid on the state high school in North Carolina. The course looks toward preparation to meet the State requirements for high school teachers. Text-books, lectures, assigned readings. Junior and Senior elective. *Both terms, three hours.* Professor WILLIAMS.

53-54. Rural School Administration. This course will offer a comparative study of State and County school systems, as affecting rural schools. Particular attention will be paid to methods of raising and apportioning school funds; to the various types of schools; to the most effective division of the county into districts for school purposes; to school architecture; to school hygiene; to methods of licensing and appointing teachers; to qualifications, powers and duties of school officials; and to associated and philanthropic agencies. This course will be conducted with particular reference to the needs of those expecting to become principals and superintendents. Lectures, text-books, readings, conferences, and first-hand study of the work of county school systems. Junior and Senior elective. *Both terms, three hours.* Professor JUDD.

55-56. Educational Sociology. The social and industrial character of present-day country life and the district, village and town school as its chief institution will be the concerns of this course. The chief problems of the home, the farm, and the associational life of the community will be discussed. The country school evolved in the endeavor to offer solutions to these problems will be defined. Text-book and supplementary readings. Junior and Senior elective. *Both terms, two hours.* Professor JUDD.

61-62. Administration: a study of state and county educational re-organization. The larger problems of necessary state, county and city officers of education, their powers and duties, the sources of income and distribution of expenditure for schools, the units of efficient organization in large and small school systems, etc., will be carefully studied in detail. Text-book, discussions, assigned readings. Senior elective. *Both terms, two hours.* Professor WILLIAMS.

Library Administration

1-2. School Library Administration: a study of the principles and practical management of school libraries, preparation of debates and debate references, reference books, reading courses and children's reading, book selection and ordering, classification and cataloguing, technical methods; practice in the University library. Junior and Senior elective, open only to library assistants and those preparing to become library assistants, or to those taking Education 3, or 51-52, or 53-54. *Both terms, two hours.* Professor WILSON.

DEPARTMENT OF ELECTRICAL ENGINEERING

PARKER HAYWARD DAGGETT, S. B., *Professor of Electrical Engineering.*

JOHN WESLEY MCIVER, S. B., *Fellow in Electrical Engineering.*

MALCOLM NORVAL OATES, S. B., *Assistant in Electrical Engineering.*

[For description of Electrical Engineering Laboratories, see page 245.]

5. Steam Machinery: a general elementary course in the construction, operation and use of the machinery of modern power plants, designed to give a working knowledge of the apparatus in preparation for course 34. The topics considered are the construction and operation of steam boilers, mechanical stokers, feed-pumps and feedwater heaters, simple slide-valve engines, multiple-expansion engines, steam turbines and gas engines. A brief study is made of fuels and combustion, draft, valves and valve-gears. Text: Allen and Bursley's *Heat Engines*. Junior and Senior elective. Prerequisites, Drawing 1-2 and Physics 1-2. *Fall term, two hours.* Mr. MCIVER.

9-10. Generation, Transmission and Utilization of Electrical Energy. This course is designed primarily for students of Chemical and Civil Engineering, and others who desire to obtain a general practical knowledge of electrical apparatus, including direct and alternating current dynamos, transformers, motor starters and controllers, storage-batteries, and incandescent and arc lamps. Special attention is paid to commercial applications of electric power, such as motor-drive for manufacturing purposes, electric traction and hoisting, electrical illumination, auto-

mobile and train lighting, and the transmission and distribution of power by electricity. Text: Gray's *Principles and Practice of Electrical Engineering*. Lectures, recitations and laboratory work. Junior and Senior elective. Prerequisites, Mathematics 3-4 and Physics 1-2. *Both terms, three hours.* Mr. McIVER and Mr. OATES.

Laboratory fee, \$3.00 a term.

11-12. Elements of Electrical Engineering: a general survey of the fundamental principles of electric circuits and machinery, designed to furnish a thorough preparation for advanced work in Electrical Engineering. During the first term a study is made of the underlying principles and laws of the electrostatic and the electromagnetic field, direct-current circuits and the theory, structural features and operating characteristics of direct-current machinery. The work of the second term is devoted principally to an extension of the laws of direct-current circuits to the phenomena of alternating-current circuits. The construction and operating features of alternating-current machines are also considered briefly in comparison with the corresponding direct-current equivalents. Text: Christie's *Electrical Engineering*. Junior and Senior elective. Prerequisites, Mathematics 3-4 and Physics 1-2 and 3-4. *Both terms, three hours.* Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$3.00 a term.

13. Theory of Electric Circuits. This is an advanced course consisting of an intensive study of the laws of the electric, magnetic and dielectric circuits based on the works of Karapetoff and Steinmetz. Emphasis is placed on the circuital relations existing in these three circuits, and the treatment of each is, so far as possible, identical. A thorough study is made of alternating-current circuits, the aim being to correlate the work with the laws of direct-current circuits in order that a proper perspective may be obtained, and a standard method of treatment adopted for the study of the various types of dynamo-electric machinery. The laboratory work comprises a study of the effects of inductance and capacitance in circuits, hysteresis and eddy-currents in iron, e. m. f. wave-shapes, the electrical relations in polyphase circuits, and the effects of iron in alternating current circuits. Text: Karapetoff's *The Electric Circuit and the Magnetic Circuit*, and

Steinmetz's *Alternating Current Phenomena*. Senior elective. Prerequisites Mathematics 11-12 and E. E. 11-12. *Fall term, eight hours*. Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

14. Direct and Alternating-Current Machinery. This course consists of an analytical study of the performance of electrical machines. The work is correlated closely with E. E. 18. In general are considered such questions as predetermination of e. m. f. wave-shapes of alternators; leakage-reactance of windings; exciting ampere-turns in direct-current machines, synchronous-generators, motors, converters, and induction machines; armature reaction and regulation of direct-current machines and alternators. For the laboratory work a predetermination of the performance of the machine is made from the dimensions and design constants and the results are checked by actual test of the performance in the laboratory. Senior elective. Prerequisite, E. E. 13. *Spring term, four hours*. Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

18. Dynamo Design. A course in the principles of the design of standard electric machines. Emphasis is placed on logical analysis of the various problems, both from a theoretical point of view and in the light of commercial limitations and economic conditions involved in manufacturing. The work comprises a study of the design, construction and proportions of direct-current dynamos, alternators, induction motors, synchronous converters and transformers, and parallels closely the work in course 14. Text: Gray's *Electrical Machine Design* supplemented by wide reading in the works of Hobart, Adams, Arnold and others. Senior elective. Must be accompanied by E. E. 14. *Spring term, four hours*. Professor DAGGETT.

21. Electric Measuring Instruments: a study of the theory, construction and methods of use of the various instruments used in electric measurements and testing:—ammeters, voltmeters, wattmeters, watthour meters, galvanometers, potentiometers, phase and frequency meters, synchrosopes. In the laboratory a study is made of the methods of calibration, special attention

being devoted to the testing of watthour meters. Considerable attention is also given to the errors involved in measurements. Text: Jansky's *Electrical Meters*. Senior elective. Prerequisites, E. E. 11-12. *Fall term, three hours*. Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

22. Commercial Electric Testing. This course consists principally of a laboratory study of the methods of testing electrical machinery used in commercial practice. Direct and alternating-current machines treated under the following heads: temperature tests; coreloss, friction and windage, and efficiency; voltage regulation of generators and speed regulation of motors; commutation tests and adjustment of commutating pole motors; insulation testing; methods of loading and miscellaneous tests. Text: Karapetoff's *Experimental Electrical Engineering*. Senior elective. Prerequisites E. E. 13 and 21. *Spring term, three hours*. Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

31. Electric Power Transmission. A course of lectures and recitations on the design of long distance transmission lines. (a) The economic principles involved in the preliminary design and lay-out. (b) Electrical principles; line materials and constant; regulation; transient phenomena; insulation and lighting protection. (c) Mechanical design: sag of conductors; spans; poles and towers. Text: Still's *Overhead Electric Power Transmission*. Senior elective. Prerequisite, E. E. 13. *Fall term, three hours*. Professor DAGGETT.

32. Telephone and Telegraph Engineering. This course deals with the principles of the transmission of intelligence by telephone and telegraph, including a brief study of radio-telegraphy. Special attention is given to the theory of telephonic transmission, loading coils, inductive disturbances and the layout of the telephone plant. In the laboratory a study is made of standard telephone instruments, switchboards and circuits, and practice is given in the location of faults in cables and lines. Senior elective. Prerequisite E. E. 13. *Spring term, two hours*. Professor DAGGETT.

Laboratory fee, \$2.00.

33. Illuminating Engineering. The work of this course begins with a study of the physics of light, including an experimental lecture by Professor Patterson, followed by lectures on the physiological and psychological aspects of the subject by Professors Manning and Chase. Considerable time is then devoted to the subject of photometry, after which a study is made of modern sources of artificial light. Finally are considered the principles of design of interior and exterior illumination, special attention being devoted to the conservation of the eyesight, and the attainment of the highest efficiency consistent with the best artistic effect. Senior elective. Prerequisite, E. E. 11-12. *Fall term, three hours.* Professor DAGGETT.

Laboratory fee, \$3.00.

34. Electric Power Plants: a continuation of E. E. 5, from the standpoint of the choice of machines and apparatus, and the layout of the plant as a whole. Considerable attention is devoted to the electrical control apparatus and switch-gear. A brief survey is made of the organization and management of power plants, including the questions of rates and relations to the public. Text: Myer's *Steam Power Plants*. Senior elective. Prerequisites, Physics 5-6 and E. E. 5 and 11-12. *Spring term, two hours.* Professor DAGGETT.

For courses for Graduate Students, see Graduate School.

DEPARTMENT OF ENGLISH

EDWIN GREENLAW, Ph. D., *Professor of English.*

GEORGE MCFARLAND MCKIE, A. M., *Associate Professor of Public Speaking.*

JOHN MANNING BOOKER, Ph. D., *Associate Professor of English.*

JAMES HOLLY HANFORD, Ph. D., *Associate Professor of English.*

NORMAN FOERSTER, A. M., *Associate Professor of English.*

HENRY MCCUNE DARGAN, Ph. D., *Instructor in English.*

RICHARD HURT THORNTON, A. M., *Instructor in English.*

ARNOLD ARTEMUS MCKAY, A. B., *Assistant in English.*

DANIEL LAMONT SECKINGER, A. B., *Assistant in English.*

1-2. Freshman English. Themes are written throughout the year; analytical outlines are prepared about twice a month; a

dozen expository essays are studied in detail, with chief emphasis on the ideas contained in them. In the second term some attention is given to narration. The course aims at (1) correct writing, (2) clear thinking, and (3) thorough reading. Required of Freshmen. *Both terms, three hours.* Associate Professor FOERSTER (Chairman); Associate Professors BOOKER and HANFORD, and Messrs. DARGAN, THORNTON, MCKAY, SECKINGER.

3-4. The History of English Literature. A study of representative prose and verse from *Beowulf* to the end of the nineteenth century. The stress falls upon the actual study of literature rather than literary history, biography, or criticism, but a syllabus is used as a guide. Reports, outlines, and summaries, based on the material read, are required at frequent intervals, and class-work consists of discussions by instructors and students rather than of lectures. Required of Sophomores. *Both terms, three hours.* Associate Professor HANFORD (Chairman); Professor GREENLAW, Associate Professor BOOKER, and Messrs. DARGAN, THORNTON.

The attention of students taking this course is called to course 5-6.

5-6. Literature and its Aims. Most of the first term will be devoted to a consideration of what literature (especially poetry) is, what it aims to do, and what ways of approach contribute to an understanding and enjoyment of it; one or two representative poets will then be studied in some detail. The second term will be devoted to a study of several representative prose writers (*e. g.*, Dr. Johnson, Thackeray, and Emerson). This course may be elected by Sophomores as a supplement to course 3-4, or by Juniors and Seniors who are not majoring in English. *Both terms, two hours.* Associate Professor FOERSTER.

11-12. Public Speaking. A course in declamation and in simple extempore speaking on subjects of current interest. The aim of this course is to correct faults in speech and to form the habit of simple, clear, direct speaking. Required of Freshmen. *Both terms, one hour.* Associate Professor MCKIE.

13-14. The Forms of Public Address. The argumentative speech, the commemorative address, the after dinner speech, the eulogy. Open to Sophomores who have attained a grade of 2 in

English 2, and to Juniors and Seniors. *Both terms, two hours.* Associate Professor McKIE.

15-16. Debating. The preparation of briefs and forensics, and practice in oral debate. Junior and Senior elective. Prerequisite, English 21. *Both terms, two hours.* Associate Professor McKIE.

17-18. Interpretative Speaking and Reading. The purpose of the course is to develop through vocal expression an appreciation of good literature, and an ability to interest others in the works of great writers. Open to Sophomores who have attained a grade of 2 in English 12, and to Juniors and Seniors. *Both terms, two hours.* Associate Professor McKIE.

21-22. English Composition. This course differs from course 23-24 in being less advanced and in including practice in argumentation. Junior and Senior elective. *Both terms, three hours.*

This course is omitted in 1914-1915; to be given in 1915-1916.

23-24. English Composition. An advanced course affording constant practice throughout the year in various forms of prose composition. Lectures and discussions. Junior and Senior elective; prerequisite, an average of 80 in English 1-2 and 3-4. *Both terms, three hours.* Associate Professor FOERSTER.

27-28. Journalism. A special course of study, composed of selected electives from various departments in the College of Liberal Arts, is offered to students who are preparing for newspaper work. Students desiring to take this course are advised to consult the instructor in charge of English 27 during the second term of the Sophomore year. A special certificate will be given those who complete the plan of study. Course 27-28 offers opportunity for practice in the forms of journalistic composition, with a study of certain practical aspects of newspaper work. Junior and Senior elective. *Both terms, three hours.* Mr. THORNTON.

37-38. The Elizabethan Drama. A brief study of the beginnings of the English drama, followed by an intensive study of the period from Lyly to the closing of the theatres. While

particular attention is paid to Shakspeare, it is also the purpose of the course to study his work in connection with that of his contemporaries. The development of dramatic technique, the Elizabethan conceptions of tragedy and comedy as distinguished from those of classical or of recent times, and the relation of the drama to certain phases of Renaissance thought, are studied through the reading of a considerable number of plays. Junior and Senior elective. *Both terms, three hours.* Professor GREENLAW.

41-42. English Literature in the Age of Elizabeth. A study of the types of literature, except the drama: the sonnets and other lyrical poetry; the pastoral; the epic; prose fiction; the essay. Attention is given to the relations between English and continental literature in the Renaissance. The first term is devoted to the study of poetry, with Spenser as the basis; the second term is concerned chiefly with literary criticism and with the study of Bacon. Junior and Senior elective. *Both terms, three hours.* Professor GREENLAW.

45-46. The Classical Tradition in English Literature. This course is concerned with the influence of classical models and ideals on English literature, primarily in the sixteenth, seventeenth, and eighteenth centuries. The work of the first term will center in Milton as the culmination of English classicism; the second term will be devoted chiefly to the study of Dryden, Pope, Johnson, and other representatives of the pseudo-classicism of the Restoration and the Augustan age. Junior and Senior elective. *Both terms, three hours.* Associate Professor HANFORD.

51-52. Romanticism. While this course deals chiefly with English literature from Burns to Keats, it is complementary to course 45-46 in that the element of romanticism in literature is contrasted with the classical ideal. After a brief account of romantic elements in earlier periods and the reaction towards romanticism in the eighteenth century, the work of the first term consists of the reading and interpretation of Burns, Wordsworth, Coleridge, Scott; attention is also given to certain foreign influences, such as that of Germany, and to the development of criticism. The second term treats the poetry of Byron, Shelley, Keats, and the prose of Hazlitt, Lamb, and DeQuincey. Junior and Senior elective. *Both terms, three hours.*

To be omitted in 1915-1916.

55-56. The Victorian Era in Literature. This course will consist mainly of a somewhat detailed study of Tennyson, Brown-ing, Carlyle, Newman, and Huxley in the first term; and Arnold, Rossetti, Thackeray, and Ruskin in the second term. Junior and Senior elective. *Both terms, three hours.* Associate Professor FOERSTER.

59-60. American Literature. The course deals with the history and development of literature in America. Special attention is paid to the literature of New England and of the Middle States, to Southern literature since the Civil War, and to the western humorists. Junior and Senior elective. *Both terms, three hours.* Associate Professor BOOKER.

63-64. The Modern Drama. The first term is given to the study of the English drama since the Restoration, the principal topics being the development of the comedy of manners from Congreve to Sheridan; the growth and decay of sentimental drama; the criticism and the presentation of Shakspeare; the history of the English stage, and the divorce between literary and acted drama in the nineteenth century. The second term is given to the study of Ibsen and his influence, and to certain phases of drama represented by other recent English and continental writers. Junior and Senior elective. *Both terms, two hours.*

To be omitted in 1915-1916.

65-66. The English Novel. While this course deals with the development of prose fiction (romance, novel, short story) in England from the sixteenth century to the present time, the stress will fall on the period from Richardson to Hardy. Attention will be given to the development of the technique of the novel and the short story, and to the service of fiction as an interpretation of life. Junior and Senior elective. *Both terms, two hours.* Mr. DARGAN.

67-68. English Literature of To-day. First term: A study of the main currents in contemporary English literature. Certain representative writers are chosen, such as Kipling, Joseph Conrad, Noyes, Hardy, Arnold Bennett, Barrie. Second term: The Celtic renaissance in its various aspects, the re-awakening of the Irish national spirit, the rediscovery of Celtic legend, and the rise of mysticism and symbolism. The work of Synge, Yeats, Lady

Gregory, and William Sharp. Junior and Senior elective. *Both terms, two hours.* Associate Professor BOOKER.

71-72. Old and Middle English. In the first term a careful study is made of Old English grammar and syntax; a large amount of easy prose is read. In the second term the grammatical work and the reading are carried on into the Middle English period, with special attention to Chaucer. The aim of the course is to acquaint the student with the main facts of the beginning and development of the English language, and to introduce him to the study of early English literature. The language of the older periods is considered in its relation to present-day English; many points of confusion in Modern English, unexplained by the rules of logical grammar, are made clear. Junior and Senior elective. *Both terms, three hours.* Associate Professor HANFORD.

73-74. Old and Middle English: advanced course. The work of the first term continues the study of Old English grammar, particularly in its relation to that of the other Indo-European languages, but the major part of the term is devoted to the reading of *Beowulf*. In the second term the study of Chaucer begun in course 71-72 will be continued. Senior elective. *Both terms, two hours.* Associate Professor HANFORD.

75-76. History of the English Language. This course supplements courses 71-74. It will trace the growth of the English language from its beginnings in England until to-day. Junior and Senior elective. *Both terms, two hours.*

This course is omitted in 1914-1915.

DEPARTMENT OF GEOLOGY AND MINERALOGY

COLLIER COBB, A. M., *Professor of Geology and Mineralogy.*

JOSEPH HYDE PRATT, Ph. D., *State Geologist and Professor of Economic Geology.*

JOHN ELIPHALET SMITH, M. S., *Instructor in Geology.*

ALLYN RAYMOND BROWNSON, A. B., *Assistant in Geology.*

BASCOM LEE FEILD, *Assistant in Geology.*

[For description of Geological Laboratories, see page 250.]

1-2. Elementary Geology: lectures with field work; laboratory work on the common minerals and rocks. Sophomore, Ju-

nior, and Senior elective. *Both terms, three hours.* Professor COBB, Mr. BROWNSON and Mr. FEILD.

Laboratory fee, \$1.00 for the fall term, \$3.00 for the spring term.

3-4. Mineralogy: crystallography, physical and chemical properties of minerals, blowpipe analysis, determinations; lectures, laboratory, and field work; Dana's *Manual of Mineralogy* (Ford). Junior and Senior elective: prerequisite, Geology 1-2 and Chemistry 1-2. *Both terms, three hours.* Mr. SMITH.

Laboratory fee, \$5.00 a term.

7-8. General Critical Geology: lectures with field work; laboratory work on rocks and fossils; theses. Junior and Senior elective. *Both terms, three hours.* Professor COBB.

Laboratory fee, \$3.00 for the fall term, \$5.00 for the spring term.

11-12. Economic Geology: ore deposits, coal, oil and gas, clays, building stone, cement materials, fertilizers, underground waters, etc.; occurrence, methods of exploitation, production, and conservation of mineral resources; lectures, laboratory, and field work. Junior and Senior elective; prerequisite, Geology 1-2 and Chemistry 1-2. *Both terms, three hours.* Mr. SMITH.

Laboratory fee, \$1.00 a term.

13-14. Petrography: rocks and rock minerals, optical mineralogy, crystallography, etc.; lectures, laboratory work, theses, and field work. Junior and Senior elective. *Both terms, three hours.* Mr. SMITH.

Laboratory fee, \$3.00 a term.

21-22. Advanced course in Physiography. Senior elective; prerequisite, Geology 1-2. *Both terms, three hours.* Professor COBB.

Laboratory fee, \$2.00 a term.

23-24. Origin and Nature of Soils: field work, laboratory work, and theses. Students in this course are expected to keep Saturday open for field work. Junior and Senior elective; prerequisite, Geology 1-4, Chemistry 1-2 and 31-32, Botany 1-2. *Both terms, three hours.* Professor COBB.

Laboratory fee, \$3.00 a term.

31-32. Road Materials: rocks, sands, clays, asphalts, concrete, dust preventives, etc.; their properties and adaptations; laboratory and field work; prerequisite, Geology 1-2. *Both terms, one hour.* Mr. SMITH.

Laboratory fee, \$1.00 a term.

42. Mineral and Ore Deposits: lectures supplemented by laboratory and field work; prerequisite, Geology 1-4 and Chemistry 31-32. *Twenty-four lectures (Spring term).* Professor PRATT.

43-44. Advanced Work in Mineralogy. Senior elective. *One hour.* Professor PRATT.

51-52. Advanced field work and special research in Geology or Geography; problems and work adapted to the professional needs of the student. Students in this course are expected to keep Saturday open for field work. Senior elective; prerequisite, two courses in Geology. *Both terms, three hours.* Professor COBB.

54. Advanced Geological Field Work and Special Research: studies in the Deep River and Wadesboro areas of the Triassic rocks; a brief examination of the Potomac, Eocene, Lafayette, and Columbia deposits. This course is given in the summer. It covers five weeks, of which one is spent in Chapel Hill with daily meetings, the remaining four weeks are devoted to field work. Students who take this course will be expected to devote all their time to it. Junior and Senior elective. *One term, three hours.* Professor COBB.

The Geological Seminary meets fortnightly for review and discussion of current geological literature, and for the presentation of original papers.

For course 55-56, see Graduate School.

For courses 26-28, see School of Applied Science.

DEPARTMENT OF GERMANIC LANGUAGES

WALTER DALLAM TOY, M. A., *Professor of the Germanic Languages and Literatures.*

KENT JAMES BROWN, Ph. D., *Associate Professor of German.*

ORESTES PEARLE REIN, Ph. D., *Assistant Professor of German.*

A. Elementary Course: grammar; written and oral exercises; translation; sight reading. This course may be counted for entrance only. *Both terms, three hours.* Professor TOY, Associate Professor BROWN and Assistant Professor REIN.

1-2. Translation, sight reading, composition, grammar. Required of Freshmen in Group 3, elective in Group 2; Sophomore elective. *Both terms, three hours.* Professor TOY, Associate Professor BROWN, and Assistant Professor REIN.

11-12. Practice in writing and speaking German. Prerequisite, German 1-2. Junior and Senior elective. *Both terms, two hours.* Associate Professor BROWN.

21-22. Schiller: Maria Stuart, Wilhelm Tell; Goethe: Egmont, Iphigenie auf Tauris; Lessing: Minna von Barnhelm. Sophomore elective in Group 2; Junior and Senior elective; prerequisite, German 1-2. *Both terms, three hours.* Assistant Professor REIN.

23-24. Romanticism in Germany. Lectures. Reading of selected texts. Junior and Senior elective; prerequisite, German 1-2. *Both terms, two hours.* Professor TOY.

25-26. Wide reading of modern German prose, with lectures on the literature in the nineteenth century. Junior and Senior elective; prerequisite, German 1-2. *Both terms, three hours.* Associate Professor BROWN.

Courses 21-22, 23-24, and 25-26 are parallel in grade and offer an introduction to the study of German literature.

41-42. Goethe: Goetz von Berlichingen, Werther's Leiden, Tasso, Dichtung und Wahrheit, Hermann und Dorothea. Lectures on Goethe's life and work. Selected chapters of Scherer's *History of German Literature*, Franke's *History of German Literature*, and Bielschowsky's *Goethe, Sein Leben und Seine Werke*

will be read. Junior and Senior elective; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, two hours.* Associate Professor BROWN.

This course may be elected only after consultation with the instructor.

43-44. Goethe: Faust, Parts I and II. Junior and Senior elective; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, two hours.* Professor TOY.

This course may be elected only after consultation with the instructor.

45-46. Kleist and Hebbel. Translation and interpretation of selected dramas; lectures and collateral reading. Junior and Senior elective; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, two hours.* Associate Professor BROWN.

A certificate is granted to a student who has completed with credit any four courses exclusive of course A.

61-62. Gothic: Braune's *Gotische Grammatik*; selected parts of Paul's *Grundriss der Germanischen Philologie*. Introduction to Germanic Philology. Junior and Senior elective; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, three hours.* Professor TOY.

63-64. Old High German: Braune's *Althochdeutsche Grammatik*; Braune's *Althochdeutsches Lesebuch*. Junior and Senior elective; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, three hours.* Professor TOY.

67-68. Middle High German: Paul's *Mittelhochdeutsche Grammatik*; Bachmann's *Mittelhochdeutsches Lesebuch*; translation into New High German. Junior and Senior elective; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, three hours.* Assistant Professor REIN.

DEPARTMENT OF GREEK

CHARLES WESLEY BAIN, M. A., LL. D., *Professor of the Greek Language and Literature.*

WILLIAM STANLY BERNARD, A. M., *Associate Professor of Greek.*

A. A course for students who have had no opportunity of studying Greek in the preparatory schools. This course may be

counted for entrance only. Moss's *First Greek Reader*; Babbitt's *Greek Grammar*; Xenophon's *Anabasis*. *Both terms, four hours.* Associate Professor BERNARD.

1-2. Xenophon's Symposium: review of important grammatical principles; Homer's Iliad, books I, II, and III, and Odyssey, book VI; Lysias, Selected Speeches. Reading at sight. Required of Freshmen in Group 1, elective in Group 2. *Both terms, four hours.* Professor BAIN and Associate Professor BERNARD.

3-4. Plato, Apology and Crito; Euripides, Hecuba; Aristophanes, Frogs; reading at sight; lectures on Greek Literature. Sophomore elective in Groups 1 and 2. *Both terms, three hours.* Professor BAIN.

5-6. Prose Composition: elementary course, intended as supplementary to Greek 1-2. Open to students who are taking Greek 1-2 or 3-4. *Both terms, one hour.* Professor BAIN.

11-12. Homer: rapid reading of the entire Odyssey. Junior and Senior elective. *Both terms, two hours.* Associate Professor BERNARD.

21-22. Lectures on Old Greek Life: History of Greek Art; text-book and lectures. Junior and Senior elective. *Both terms, two hours.* Professor BAIN.

31-32. Greek Drama: Euripides, Iphigenia Among the Taurians; Sophocles, Œdipus Tyrannus; Æschylus, Agamemnon; Aristophanes, Wasps; Aristotle, Poetics. Junior and Senior elective. *Both terms, three hours.* Professor BAIN.

33. Thucydides, Book I. Junior and Senior elective. *Fall term, three hours.* Professor BAIN.

34. Demosthenes, three Phillippics. Junior and Senior elective. *Spring term, two hours.* Professor BAIN.

42. Modern Greek: Rangabe's Handbook; Bikelas' Stories; Newspapers. Junior and Senior elective. *Spring term, two hours.* Professor BAIN.

43. The Greek New Testament: The Acts of the Apostles, study of grammar and diction, comparison with English versions.

Junior and Senior elective; prerequisite, Greek 3-4. *Fall term, two hours.* Associate Professor BERNARD.

44. The Greek New Testament: The Gospels; selections from the Epistles and Revelation; the principles of textual criticism; sources of the Greek text with history of the text and versions. Junior and Senior elective; prerequisite, Greek 43. *Spring term, two hours.* Associate Professor BERNARD.

52. Greek Epigraphy and Palæography: a brief introduction to the study of Greek inscriptions and manuscripts. Lectures and reports. Senior elective. *Spring term, two hours.* Professor BAIN.

The attention of students electing this course is called to course 51 in the Latin Department.

53-54. Indo-European Philology; introductory course. History and methods of linguistic study; growth and classification of the Indo-European languages; linguistic palæontology. Junior and Senior elective. *Both terms, two hours.* Associate Professor T. J. WILSON, JR.

The attention of students electing this course is called to course 73-74 in the Department of English and to course 61-62 in the Department of Germanic Languages. This course is the same as Latin 53-54.

61-62. Classical Archæology: History and Principles of Greek and Roman architecture, sculpture, painting, with some account of the minor arts. Lectures with prescribed reading. Junior and Senior elective. *Both terms, two hours.* Associate Professor BERNARD.

This course is the same as Latin 61-62.

64. Architecture: The development of architectural principles and styles from the reign of the Emperor Constantine to the Classical Revival. Lectures with prescribed reading. Junior and Senior elective; prerequisite, Greek 61. *Spring term, two hours.* Associate Professor BERNARD.

This course is the same as Latin 64.

For courses 8, 11, 12, and 18, see Graduate School.

A certificate is granted to a student who has completed with credit courses 1-6, and four hours of elective work.

DEPARTMENT OF HISTORY

KEMP PLUMMER BATTLE, A. M., LL. D., *Professor Emeritus of History.*

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph. D., *Alumni Professor of History.*

HENRY MCGILBERT WAGSTAFF, Ph. D., *Professor of History.*

FRANK PORTER GRAHAM, A. B., *Instructor in History.*

1-2. American History: a general course covering the social, political, and economic development of the United States; text-books, lectures, and readings. Required of Freshmen in Groups 2 and 3. *Both terms, three hours.* Professors HAMILTON and WAGSTAFF, and Mr. GRAHAM.

3-4. English History: a general course; text-books, lectures, and readings. Sophomore, Junior, and Senior elective. *Both terms, three hours.* Professor WAGSTAFF.

5-6. The English Government and Constitution: a careful study of English constitutional and political development and of the present government of the English people. Lectures, text-books, and readings. Junior and Senior elective. *Both terms, two hours.* Professor HAMILTON.

7-8. The American Government and Constitution: a detailed study of political customs and institutions of the American people; followed in the spring term by a careful study of the Constitution of the United States by means of cases. Text-books, lectures, and readings. Junior and Senior elective. Open also to Sophomores who have attained a grade of 90 on History 1-2. *Both terms, three hours.* Professor HAMILTON.

9-10. Spanish-American History: the course especially emphasizes the history of the leading Spanish-American countries from the revolutionary period to the present; lectures, text-books and readings. Junior and Senior elective; open also to Sophomores. *Both terms, two hours.* Professor WAGSTAFF.

11-12. Mediæval European History: a general course covering the period, 400-1648; text-books, readings, and lectures. Junior and Senior elective. *Both terms, two hours.* Professor WAGSTAFF.

This course alternates with course 13-14; to be given in 1915-1916.

13-14. Modern European History: a general course covering the period, 1648-1900; text-books, readings, and lectures. Junior and Senior elective. *Both terms, two hours.* Professor WAGSTAFF.

This course alternates with course 11-12; to be omitted in 1915-1916.

15-16. Classical History: a general course dealing largely with the Greeks and the Romans; text-books, lectures, and readings. Sophomore, Junior and Senior elective. *Both terms, three hours.*

17-18. North Carolina History: a general study of the constitutional, social, economic, and political development of the State; lectures, readings, and reports. Junior and Senior elective; open also to certain approved Sophomores. *Both terms, two hours.* Professor HAMILTON.

19-20. Civil War and Reconstruction: a detailed study of the constitutional, political, and economic phases of the period of Civil War and Reconstruction; lectures, readings, and reports. Senior elective. *Both terms, two hours.* Professor HAMILTON.
To be omitted in 1915-1916.

21. The Middle Period: a careful study of the more important movements in the United States from the adoption of the Constitution to 1850; lectures, text-books, readings, and reports. Junior and Senior elective. *Fall term, two hours.* Professor HAMILTON.

To be omitted in 1915-1916.

22. The Protestant Revolt: a detailed study of the causes, progress, and results of the Protestant movement, with special attention to the lives, doctrines, and influence of Luther and Calvin; text-books, lectures, and readings. Junior and Senior elective. *Spring term, two hours.* Professor HAMILTON.

To be omitted in 1915-1916.

23. The French Revolution: a detailed study of the causes, progress, and results of the Revolution; text-books, lectures, and readings. Junior and Senior elective. *Fall term, two hours.* Professor HAMILTON.

To be omitted in 1915-1916.

25-26. Modern Municipal Government: a course dealing with urban development and problems in Europe and the United States during the nineteenth century; lectures, readings, and discussions. *Both terms, two hours.*

To be omitted in 1915-1916.

A certificate is granted to a student who has completed with credit fifteen hours in History.

For courses 27-28 and 29-30, see Graduate School.

DEPARTMENT OF LATIN

GEORGE HOWE, Ph. D., *Professor of the Latin Language and Literature.*

THOMAS JAMES WILSON, JR., Ph. D., *Associate Professor of Latin.*

GEORGE KENNETH GRANT HENRY, Ph. D., *Assistant Professor of Latin.*

WILBUR HIGH ROYSTER, A. M., *Instructor in Latin.*

1-2. Cicero, *De Senectute* and *De Amicitia*; Livy, Book I; Horace, *Odes* and *Epodes*; sight reading. Required of Freshmen in Group 1, elective in Group 2. *Both terms, four hours.* Professor HOWE, Associate Professor WILSON, Assistant Professor HENRY and Mr. ROYSTER.

3-4. Plautus, *Menæchmi*; Terence, *Phormio*; Horace, *Satires* and *Epistles*; Tacitus, *Agricola* and *Germania*. Sophomore elective in Groups 1 and 2. *Both terms, three hours.* Professor HOWE, Associate Professor WILSON, Assistant Professor HENRY and Mr. ROYSTER.

5-6. Latin Prose Composition: based on Cicero and Livy; intended as supplementary to Latin 1-2. Open to students who are taking Latin 1-2 or 3-4. *Both terms, one hour.* Assistant Professor HENRY.

11-12. A Course for Teachers: embracing pronunciation, prosody, the art of reading Latin, and a classification of moods and tenses. Junior and Senior elective. *Both terms, two hours.* Assistant Professor HENRY.

21. The Private Life of the Romans: lectures. Junior and

Senior elective; open also to Sophomores who are taking Latin 3-4. *Fall term, two hours.* Professor HOWE.

This course alternates with course 23; to be omitted in 1915-1916.

22. History of Roman Literature: lectures. Junior and Senior elective; open also to Sophomores who are taking Latin 3-4. *Spring term, two hours.* Professor HOWE.

23. Roman Political Institutions: lectures. Junior and Senior elective; open also to Sophomores who are taking Latin 3-4. *Fall term, two hours.* Professor HOWE.

This course alternates with course 21; to be given in 1915-1916.

31-32. Latin Dramatic Poetry: a study of the historical development of Latin comedy and tragedy, with some consideration of other dramatic forms; reading of selected plays of Plautus, Terence, and Seneca. Junior and Senior elective. *Both terms, three hours.* Mr. ROYSTER.

This course alternates with course 33-34; to be given in 1915-1916.

33-34. Latin Prose Literature: the course is concerned mainly with the study of the epistolary and historical literature; reading of selected letters from Cicero and Pliny and of passages from Livy, Tacitus, and other historians. Junior and Senior elective. *Both terms, three hours.* Mr. ROYSTER.

This course alternates with course 31-32; to be omitted in 1915-1916.

35-36. Roman Elegiac Poets: rapid reading of selected elegies of Catullus, Tibullus, Propertius, and Ovid; a study of the lives of the elegists; the history of Greek and Roman elegy. Junior and Senior elective. *Both terms, three hours.* Professor HOWE.

This course alternates with course 37-38; to be given in 1915-1916.

37-38. The Latin Epic: Vergil will be the central theme of this course, but the development of the Latin Epic will be treated historically and illustrative readings in other poets will be assigned. Junior and Senior elective. *Both terms, three hours.* Professor HOWE.

This course alternates with course 35-36; to be omitted in 1915-1916.

51. Latin Epigraphy and Palæography: a brief introduction to the study of Latin inscriptions and manuscripts. Lectures and

reports. Senior elective. *Fall term, two hours.* Professor HOWE.

The attention of students electing this course is called to course 52 in the Department of Greek.

53-54. Indo-European Philology: introductory course. History and methods of linguistic study; growth and classification of the Indo-European languages; linguistic palæontology. Lectures. Junior and Senior elective. *Both terms, two hours.* Associate Professor WILSON.

The attention of students electing this course is called to course 73-74 in the Department of English and to course 61-62 in the Department of Germanic Languages. The course is the same as Greek 53-54.

61-62. Classical Archæology: History and Principles of Greek and Roman architecture, sculpture, painting, with some account of the minor arts. Lectures with prescribed reading. Junior and Senior elective. *Both terms, two hours.* Associate Professor BERNARD.

This course is the same as Greek 61-62.

64. Architecture: the development of architectural principles and styles from the reign of Emperor Constantine to the Classical Revival. Lectures with prescribed reading. Junior and Senior elective; prerequisite, Latin 61. *Spring term, two hours.* Associate Professor BERNARD.

This course is the same as Greek 64.

For courses 45-46 and 55-56, see Graduate School.

A certificate is granted to a student who has completed with credit courses 1-6, and six hours of elective work.

DEPARTMENT OF MATHEMATICS

WILLIAM CAIN, A. M., *Professor of Mathematics.*

ARCHIBALD HENDERSON, Ph. D., *Professor of Pure Mathematics.*

MARVIN HENDRIX STACY, A. M., *Professor of Civil Engineering.*

THOMAS FELIX HICKERSON, A. M., *Associate Professor of Civil Engineering.*

ROBERT LANE JAMES, C. E., *Assistant Professor of Drawing.*

JOHN WAYNE LASLEY, JR., A. M., *Instructor in Mathematics.*

HUBERT WALTER COLLINS, S. B., *Instructor in Mathematics and Surveying.*

WALTON STALEY WICKER, A. B., *Assistant in Mathematics.*

Pure Mathematics

1-2. Algebra: from Quadratics through Theory of Equations (Fine's *College Algebra*); Plane and Spherical Trigonometry and Logarithms. Required of Freshmen. *Both terms, four hours.* Professor HENDERSON, Associate Professor HICKERSON, and Messrs. LASLEY and RANKIN.

3-4. Brief course in Conic Sections; Elementary Course in Differential and Integral Calculus (Cain's *Brief Course in the Calculus*). Required of Sophomores in Group 3, elective in Groups 1 and 2. *Both terms, three hours.* Professors CAIN and HENDERSON.

5-6. Graphics: Descriptive Geometry; Shades, Shadows, and Elementary Perspective; lectures, recitations. Junior and Senior elective; prerequisite, Drawing 1-2. *Both terms, two hours.* Assistant Professor JAMES.

9. Theory of Equations. Sophomore, Junior, and Senior elective; prerequisite, Mathematics 1-2. *Fall term, two hours.* Professor HENDERSON.

10. Differential Equations: elementary course. Junior and Senior elective; prerequisite, fall term of Mathematics 11-12. *Spring term, two hours.* Professor HENDERSON.

11-12. Calculus, Analytic Mechanics. Junior and Senior elective; prerequisite, Mathematics 3-4. *Both terms, three hours.* Professor CAIN.

13-14. Theory of Equations (Burnside and Panton). Junior and Senior elective; prerequisite, Mathematics 3-4. *Both terms, three hours.* Professor HENDERSON.

15-16. Differential Equations (Murray). Senior elective; prerequisite, Mathematics 11-12. *Both terms, three hours.* Professor HENDERSON.

For additional courses, see Graduate School.

Civil Engineering

1-2. Surveying (Raymond) and Higher Surveying, Drawing. Junior and Senior elective; prerequisite, Mathematics 1-2. *Both terms, three hours.* Professor STACY, Associate Professor HICKERSON, and Mr. COLLINS.

3-4. Elementary Mechanics (Loney). Junior and Senior elective; prerequisite, Mathematics 1-2. *Both terms, two hours.* Associate Professor HICKERSON.

9-10. Road and Railroad Surveying and Engineering. Senior elective; prerequisite, C. E., 1-2. *Both terms, three hours.* Professor STACY.

11-12. Highway Location, Construction, and Maintenance. Prerequisite, C. E., 1-2. Senior elective. *Both terms, two hours.* Associate Professor HICKERSON.

15-16. Mechanics of Engineering. Senior elective; prerequisite, C. E. 3-4. *Both terms, three hours.* Professor STACY.

19-20. Hydraulics and Sanitary Engineering. Senior elective; prerequisite, Mathematics 11-12. *Both terms, three hours.* Professor STACY.

21-22. Retaining Walls and Dams, Arches. Senior elective; prerequisite, Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

23-24. Theory of Structures. Senior elective; prerequisite, C. E. 15-16. *Both terms, four hours.* Associate Professor HICKERSON.

25-26. Design of Bridges. Senior elective; to be taken in connection with C. E. 23-24. *Both terms, three hours.* Associate Professor HICKERSON.

Drawing

1-2. This course is designed to give the student who has never handled mathematical drawing instruments a thorough course of instruction in their use, and an understanding of the elementary principles of mechanical drawing. Instruction in free hand lettering is given in connection with this course. Text-

book, French's *Engineering Drawing*. *Both terms, two hours.* Assistant Professor JAMES.

3-4. Civil Engineering Drawing: (a) Land survey and topographic mapping; (b) Advanced lettering: the Roman and Gothic letters and the arrangement of lettering on maps and titles; (c) Structural Drawing: a study of the drawing of girders, trusses and various minor engineering structures. Prerequisite, Drawing 1-2. *Both terms, two hours.* Assistant Professor JAMES.

5-6. Machine Drawing: A study of the representation of machine parts; detail and assembly drawings from models and sketches, careful attention being given to billing of material and to standard drawing room practice and systems. The last few weeks of the course are devoted to the study of the elementary principles of mechanism and the solution of several problems based thereon. Prerequisite, Drawing 1-2. *Both terms, two hours.* Assistant Professor JAMES.

11. The advanced theory and practice of perspective and its application to engineering structures. Senior elective. Prerequisites, Drawing 1-2 and Mathematics 5-6. *Fall term, two hours.* Assistant Professor JAMES.

12. Stereotomy: a course in the application of Descriptive Geometry to the making of drawings for masonry structures, such as intersecting arches and walls, abutments, piers, and culverts. A study of warped surfaces and drawings for the helicoidal arch. Senior elective; prerequisite, Mathematics 5-6. *Spring term, two hours.* Assistant Professor JAMES.

DEPARTMENT OF PHILOSOPHY

HENRY HORACE WILLIAMS, A. M., B. D., *Professor of Philosophy.*

HARRY WOODBURN CHASE, Ph. D., *Professor of Psychology.*

Psychology

1-2. Introduction to Psychology. The aim of the course is to introduce the student to the subject-matter and methods of general psychology. Among the topics considered are the nervous system and its relation to mental life, habit, sensation, at-

tention, perception, the higher intellectual processes, feeling and emotion, instinct, action. Special lectures will be devoted from time to time to the applications of psychology to different fields, and class demonstrations of typical experimental problems will be given. Text-books, lectures, class exercises, assigned readings. Junior and Senior elective. *Both terms, three hours.* Professor CHASE.

3-4. Genetic Psychology. This course attempts to trace in broad outline the development of behavior in the race and the individual. Typical experimental methods of attack on problems of animal behavior and their results will be briefly treated, with particular reference to their bearing on behavior in man. Mental development in the individual will be discussed, and various abnormal phenomena will be considered in their bearing on normal human behavior. Lectures, assigned readings, thesis. Junior and Senior elective. Prerequisite, Philosophy 1-2 or Education 41-42. *Both terms, two hours.* Professor CHASE.

The attention of students of Psychology is called to course 44 in the Department of Education. This is a laboratory course (three hours a week, spring term) for students in Psychology and in Educational Psychology, and may be elected on the satisfactory completion of the fall term of Philosophy 1-2.

Philosophy

11-12. Logic: lectures, with text-books; the study of logic in life. Junior and Senior elective. *Both terms, two hours.* Professor WILLIAMS.

13-14. Ethics: criticism and discussions. Junior and Senior elective. *Both terms, two hours.* Professor WILLIAMS.

15-16. Philosophy: lectures; theses; a study of the forces that shape life. Junior and Senior elective. *Both terms, three hours.* Professor WILLIAMS.

19-20. A Companion Course to Philosophy 15-16. The aim of the course is to sketch the forces masterful in modern life. Junior and Senior elective. *Both terms, three hours.* Professor WILLIAMS.

For course 17-18, see Graduate School.

DEPARTMENT OF PHYSICS

ANDREW HENRY PATTERSON, A. M., *Professor of Physics.*

VIVIAN LEROY CHRISLER, A. M., *Instructor in Physics.*

EDWIN FULLER CONRAD, *Assistant in Physics.*

GEORGE WALLACE SMITH, *Assistant in Physics.*

VANN WARD MCGEE, *Assistant in Physics.*

LEE HENRY EDWARDS, *Assistant in Physics.*

[For description of Physical Laboratories, see page 245.]

A. Elementary Physics: lectures, with text-book, weekly written reviews, laboratory work. May be counted for entrance. *Both terms, three hours.* Messrs. CHRISLER and CONRAD.

Laboratory fee, \$1.00 a term.

1-2. General Physics: lectures, with text-book; problems; laboratory work. Required of Sophomores in Group 3; elective in Groups 1 and 2; prerequisite, Mathematics 1-2. *Both terms, three hours.* Professor PATTERSON and Messrs. CHRISLER, CONRAD, SMITH, MCGEE and EDWARDS.

Laboratory fee, \$1.50 a term.

3-4. Electricity and Magnetism: lectures and laboratory work. Junior and Senior elective. *Both terms, two hours.* Professor PATTERSON.

Laboratory fee, \$2.00 a term.

5-6. Heat and Thermodynamics. Junior and Senior elective; prerequisite, Physics 1-2. *Both terms, two hours.* Professor PATTERSON.

7-8. Modern Electrical Theory: the electron theory, electrolysis, conduction of electricity through gases, electrical nature of matter, radioactivity; lectures and recitations. Junior and Senior elective; prerequisite, Physics 1-2. *Both terms, two hours.* Professor PATTERSON.

11-12. Descriptive Astronomy: a general course; lectures and recitations with use of lantern slides, telescope, etc. Junior and Senior elective; prerequisite, Physics 1-2. *Both terms, two hours.* Professor PATTERSON.

[For courses in Electrical Engineering, see page 52.]

DEPARTMENT OF ROMANCE LANGUAGES

WILLIAM MORTON DEY, Ph. D., *Professor of the Romance Languages and Literatures.*

OLIVER TOWLES, Ph. D., *Associate Professor of the Romance Languages.*

EUGENE FRED PARKER, A. M., *Instructor in the Romance Languages.*

French

A. Elementary course. Direct method of instruction: Beginners' French (Walter and Ballard). Reading: *Le Français et sa Patrie* (Talbot), and other texts. This course may be counted for entrance only. *Both terms, three hours.* Professor DEY, Associate Professor TOWLES, and Mr. PARKER.

1-2. Continuation of Course A. Direct method of instruction. Reading of modern French literature. Required of Freshmen in Group 3; elective in Group 2; Sophomore elective. *Both terms, three hours.* Associate Professor TOWLES and Mr. PARKER.

3-4. Advanced Course: studies in reading and writing French. French phonetics. Sophomore elective in Group 2; Junior and Senior elective; prerequisite, French 1-2. *Both terms, three hours.* Professor DEY.

5-6. French Literature: a general outline of its various periods. Lectures, reading, reports. Junior and Senior elective; prerequisite, French 3-4. *Both terms, three hours.* Associate Professor TOWLES.

11-12. French Literature in the Seventeenth Century. Lectures, reading, reports. Junior and Senior elective; prerequisite, French 5-6. *Both terms, three hours.* Associate Professor TOWLES.

This course alternates with course 13-14; to be given in 1915-1916.

13-14. French Literature in the Eighteenth Century. Lectures, reading, reports. Junior and Senior elective; prerequisite, French 5-6. *Both terms, three hours.* Professor DEY.

This course alternates with course 11-12; to be omitted in 1915-1916.

15-16. French Literature in the Nineteenth Century. Lectures, reading, reports. Junior and Senior elective; prerequisite, French 5-6. *Both terms, three hours.* Professor DEY.

17-18. The French Drama. A study of the development of the drama in France. Lectures, reading, and much collateral reading with reports. Junior and Senior elective; open to those who have taken, or who take at the same time, French 5-6. *Both terms, two hours.* Professor DEY.

A certificate is granted to a student who has completed with credit any four courses exclusive of course A.

For courses for graduate students, see Graduate School.

Spanish

1-2. Elementary Course. Direct method of instruction: All-Spanish Method (Hall). Reading of selected texts. Junior and Senior elective. *Both terms, three hours.* Professor DEY.

3-4. Second-Year Course. Direct Method continued. Wide reading of modern Spanish authors. Junior and Senior elective; prerequisite, Spanish 1-2. *Both terms, three hours.* Professor DEY.

11-12. Spanish Literature in the Sixteenth and Seventeenth Centuries: Cervantes, Lope de Vega, Calderon. Junior and Senior elective; prerequisite, Spanish 3-4. *Both terms, two hours.* Professor DEY.

Italian

1-2. Elementary Course: grammar, pronunciation; oral and written exercises; translation and reading at sight. Junior and Senior elective; prerequisite, French 1-2. *Both terms, three hours.* Associate Professor TOWLES.

DEPARTMENT OF ZOOLOGY

HENRY VAN PETERS WILSON, Ph. D., *Professor of Zoology.*

WESLEY CRITZ GEORGE, A. M., *Instructor in Zoology.*

WILLIAM RANEY STANFORD, *Assistant in Zoology.*

ADAM TREDWELL THORP, *Assistant in Zoology.*

[For description of Biological Laboratories, see page 249.]

1-2. Elements of Zoology: an introductory course giving an

outline of the classification and structure of animals, fundamentals of histology, embryology, and physiology with some consideration of biological theories. Lectures with laboratory work. Sophomore, Junior, and Senior elective, and open to First Year Medical students. *Both terms, three hours.* Professor WILSON and Mr. GEORGE.

3-4. Comparative Anatomy and Embryology of the Vertebrates: dissection of types, especially amphioxus, petromyzon, fish, fowl, mammal; early stages in embryology of ascaris, starfish; segmentation and formation of germ layers in teleost and frog; germ layers and development of characteristic vertebrate organs in chick; selected stages in development of mammal (rabbit, pig); fundamentals of microscopic technique; laboratory work with occasional lectures. Junior and Senior elective. *Both terms, three hours.* Professor WILSON and Mr. GEORGE.

6. High School Zoology: a brief course covering pedagogic and laboratory methods requisite to the handling of classes in elementary physiology and zoology. Designed for those who expect to teach in the high schools. Prerequisite, Zoology 1-2. *Spring term, two hours.* Professor WILSON.

7-8. General Zoology: an advanced course for such as expect to teach or to carry on investigations in zoological, or allied medical, subjects. Laboratory work to cover anatomy, with some histology and embryology, of chief orders of animals, especially invertebrates: collecting trips: identification of forms; essentials of gross and microscopic photography; microscopic technique supplementary to that of the usual courses in embryology and histology. Conferences and lectures dealing with morphology of groups, history of zoology, and the theories of biology as deduced from facts of comparative and experimental study. Junior and Senior elective. *Both terms, five hours.* Professor WILSON.

A certificate is granted to a student who has completed with credit courses 1-8, and Botany 1-2.

SCHOOL OF APPLIED SCIENCE

FACULTY

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., PRESIDENT.

ANDREW HENRY PATTERSON, A. M., DEAN.

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., *Francis Preston Venable Professor of Chemistry.*

WILLIAM CAIN, A. M., *Professor of Mathematics.*

COLLIER COBB, A. M., *Professor of Geology and Mineralogy.*

JOSEPH HYDE PRATT, Ph. D., *Professor of Economic Geology.*

CHARLES HOLMES HERTY, Ph. D., *Professor of General and Industrial Chemistry.*

ARCHIBALD HENDERSON, Ph. D., *Professor of Pure Mathematics.*

ANDREW HENRY PATTERSON, A. M., *Professor of Physics.*

MARVIN HENDRIX STACY, A. M., *Professor of Civil Engineering.*

ALVIN SAWYER WHEELER, Ph. D., *Professor of Organic Chemistry.*

PARKER HAYWARD DAGGETT, S. B., *Professor of Electrical Engineering.*

JAMES MUNSIE BELL, Ph. D., *Professor of Physical Chemistry.*

THOMAS FELIX HICKERSON, A. M., S. B., *Associate Professor of Civil Engineering.*

ROBERT LANE JAMES, C. E., *Assistant Professor of Drawing.*

VIVIAN LEROY CHRISLER, A. M., *Instructor in Physics.*

JOHN ELIPHALET SMITH, B. S., *Instructor in Geology.*

JOHN WAYNE LASLEY, JR., A. M., *Instructor in Mathematics.*

HUBERT WALTER COLLINS, S. B., *Instructor in Mathematics.*

WILLIAM LEWIS JEFFRIES, A. M., *Instructor in Chemistry.*

CARNIE BLAKE CARTER, M. S., *LeDoux Fellow in Chemistry.*

VICTOR ALDINE COULTER, M. S., *Fellow in Chemistry.*

VICTOR CLYDE EDWARDS, A. B., *Fellow in Organic Chemistry.*

LUCIUS COLEMAN HALL, *Assistant in Chemistry.*

OSCAR ASA PICKETT, *Assistant in Chemistry.*

WILLIAM NELSON PRITCHARD, JR., *Assistant in Chemistry.*

JOHN WESLEY McIVER, S. B., *Fellow in Electrical Engineering.*
MALCOLM NORVAL OATES, S. B., *Assistant in Electrical Engineering.*

ALLYN RAYMOND BROWNSON, A. B., *Assistant in Geology.*

BASCOM LEE FEILD, *Assistant in Geology.*

GEORGE WALLACE SMITH, *Assistant in Physics.*

VANN WARD MCGEE, *Assistant in Physics.*

LEE HENRY EDWARDS, *Assistant in Physics.*

WALTER STALEY WICKER, *Assistant in Surveying.*

COURSES LEADING TO THE DEGREE OF BACHELOR OF SCIENCE

In order to be recommended for the degree of Bachelor of Science, the student must have passed satisfactory examinations in all the studies required in one of the following courses outlined in this department, I, II, III, IV, and V. Each course combines instruction in certain sciences and their application to the arts with certain other general studies deemed essential to a liberal education. These courses are designed to furnish the fundamental instruction and to prepare students to pursue the technical professions to which they lead. The courses leading to the degree are five in number.

- I. Bachelor of Science in Chemical Engineering.
- II. Bachelor of Science in Electrical Engineering.
- III. Bachelor of Science in Civil and Highway Engineering.
- IV. Bachelor of Science in Medicine.
- V. Bachelor of Science in Soil Investigation.

ADMISSION

Candidates for admission to the School of Applied Science must present 14 units for unconditioned entrance. A complete list of these units and the requirements in each subject will be found on pp. 32-38 of the general catalogue.

The specific requirements are as follows:

English <i>a, b, c,</i>	3. units
History <i>a</i> or <i>b,</i>	2. units
Mathematics <i>a, b, c,</i>	3. units

French <i>a</i> or German <i>a</i> , ...	2. units
Science	1. unit
Elective, ...	3. units

At least twelve units must be offered at entrance.

I. BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

FRESHMAN YEAR

English 1-2, Composition	*(3)
Mathematics 1-2, Advanced Algebra and Trigonometry...	(4)
German 1-2, Composition and Literature	(3)
French 1-2, Composition and Literature	(3)
Chemistry 1-2, General Chemistry	(3)
Drawing 1-2, Freehand and Mechanical	(2)

SOPHOMORE YEAR

English 5-4, Composition and Literature	(3)
Mathematics 3-4, Analytics and Calculus	(3)
Chemistry 31-32, Qualitative Analysis	(2)
Chemistry 41-42, Quantitative Analysis	(3)
Physics 1-2, General Course.....	(3)
Drawing 5-6, Machine Drawing	(2)

JUNIOR YEAR

Chemistry 8, Inorganic Chemistry, advanced	(1½)
Chemistry 11-12, Industrial Chemistry	(3)
Chemistry 45-46, Quantitative Analysis, advanced	(2)
Chemistry 47-48, Gas Anal., Assay., Spectroscopic Anal..	(1)
Chemistry 61-62, Organic Chemistry, advanced.....	(3)
Chemistry 81-82, Elementary Physical Chemistry.....	(3)
Geology 1-2, General Course	(3)
E. E. 5, Steam Machinery	(1)

SENIOR YEAR

Chemistry 18, History of Chemistry	(1)
Chemistry 23-24, Research	(5)
Chemistry 63-64, Organic Chemistry	(2)
Chemistry 83, Physical Chemistry, advanced	(1½)
Chemistry 84, Electro-Chemistry	(1½)
Geology 3-4, Mineralogy	(3)
E. E. 9-10, Electrical Energy	(3)

* Numerals in parentheses indicate the number of hours a week.

II. BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

FRESHMAN YEAR

English 1-2, Composition	(3)
Mathematics 1-2, Advanced Algebra and Trigonometry..	(4)
Select { German 1-2, Composition and Literature.....	(3)
one { French 1-2, Composition and Literature.....	(3)
Chemistry 1-2, General Chemistry	(3)
Drawing 1-2, Freehand and Mechanical.....	(2)

SOPHOMORE YEAR

English 5-4, Technical Composition and Literature.....	(3)
Mathematics 3-4, Analytics and Calculus	(3)
C. E., 3-4, Elementary Mechanics	(2)
Physics 1-2, General Course	(3)
Physics 3-4, Electricity and Magnetism	(2)
Chemistry 33, Qualitative Analysis	(1½)
Chemistry 44, Quantitative Analysis	(1)
Drawing 5-6, Machine Drawing	(2)

JUNIOR YEAR

Mathematics 5-6, Descriptive Geometry	(2)
Mathematics 11-12, Calculus and Analytic Mechanics	(3)
C. E. 1-2, Surveying	(2)
C. E. 15-16, Applied Mechanics and Strength of Materials	(3)
Physics 5-6, Thermodynamics	(2)
E. E. 5, Steam Machinery	(1)
E. E. 11-12, Elements of Electrical Engineering.....	(3)

SENIOR YEAR

C. E. 19-20, Hydraulics and Hydraulic Machinery.....	(3)
E. E. 13, Theory of Electric Circuits.....	(4)
E. E. 14, Direct and Alternating Current Machinery.....	(2)
E. E. 18, Dynamo Design	(2)
E. E. 21, Electric Measuring Instruments	(1½)
E. E. 22, Commercial Electric Testing	(1½)
Select { E. E. 31, Power Transmission	(1½)
one { E. E. 33, Illuminating Engineering	(1½)
Select { E. E. 32, Telephone and Telegraph Engineering..	(1)
one { E. E. 34, Electric Power Plants	(1)

III. BACHELOR OF SCIENCE IN CIVIL AND HIGHWAY ENGINEERING

FRESHMAN YEAR

English 1-2, Composition	(3)
Mathematics 1-2, Advanced Algebra and Trigonometry...	(4)
Select { French 1-2, Composition and Literature	(3)
one } German 1-2, Composition and Literature	(3)
Chemistry 1-2, General Course	(3)
Drawing 1-2, Freehand and Mechanical.....	(2)

SOPHOMORE YEAR

English 5-4, Technical Composition and Literature	(3)
Mathematics 3-4, Analytics and Calculus	(3)
Physics 1-2, General Course	(3)
Geology 1-2, General Course	(3)
Drawing 3-4, Topographical	(2)
C. E. 1-2, Surveying	(2)
C. E. 3-4, Elementary Mechanics	(2)

JUNIOR YEAR

Mathematics 5-6, Descriptive Geometry	(2)
Mathematics 11-12, Calculus and Analytic Mechanics	(3)
Geology 31-32, Road Materials	(1)
C. E. 9-10, Road and Railroad Surveying	(3)
C. E. 11-12, Road Construction, Drainage and Location..	(3)
C. E. 15-16, Mechanics of Engineering	(3)

SENIOR YEAR

C. E. 19-20, Hydraulic and Sanitary Engineering.....	(3)
C. E. 21-22, Retaining Walls and Dams	(2)
C. E. 23-24, Theory of Structures	(4)
C. E. 25-26, Design of Bridges	(3)
E. E. 9-10, Electrical Energy	(3)

IV. BACHELOR OF SCIENCE IN MEDICINE

FRESHMAN YEAR

English 1-2, Composition	(3)
Mathematics 1-2, Advanced Algebra and Trigonometry..	(4)
Chemistry 1-2, General Course	(3)
Botany 1-2, General Course	(3)

Select one	{ German 1-2, Composition and Literature.....	(3)
	{ French 1-2, Composition and Literature.....	(3)
	{ Latin 1-2	(4)

SOPHOMORE YEAR

English 3-4, Composition and Literature	(3)	
Physics 1-2, General Course	(3)	
Zoology 1-2, General Course	(3)	
Chemistry 33, Qualitative Analysis	(1½)	
Chemistry 44, Quantitative Analysis	(1)	
Select one	{ German 1-2 or 21-22, ...	(3)
	{ French 1-2 or 3-4, ...	(3)
	{ Latin 1-2, ...	(4)
Select one	{ Drawing 1-2, Freehand and Mechanical	(2)
	{ History 1-2, American	(3)
	{ Physics 3-4, General Course	(2)

JUNIOR YEAR*

Organic Chemistry, fall term	(6)
Toxicology, spring term	(6)
Comparative Anatomy, fall term	(6)
Human Anatomy	(10)
Histology, fall term	(9)
Embryology, spring term	(6)
Pharmacy, spring term	(6)

SENIOR YEAR

Human Anatomy, fall term	(9)
Neuro-Anatomy, fall term	(6)
Bacteriology, fall term	(9)
Physiology	(7½)
Physiological Chemistry, fall term	(6)
Pathology, spring term	(9)
Pharmacology, spring term	(10)
Minor Surgery, spring term	(4)

* The Junior and Senior courses are given in the School of Medicine, where descriptions of courses may be found.

V. BACHELOR OF SCIENCE IN SOIL INVESTIGATION

FRESHMAN YEAR

English 1-2, Composition	(3)
Mathematics 1-2, Advanced Algebra and Trigonometry ..	(4)
German 1-2, Composition and Literature.....	(3)
Chemistry 1-2, General Course	(3)
Drawing 1-2, Freehand and Mechanical	(2)
Geology 1-2, General Course	(3)

SOPHOMORE YEAR

English 5-4, Composition and Literature	(3)
C. E. 1-2, Surveying	(2)
Chemistry 31-32, Qualitative Analysis	(2)
Physics 1-2, General Course	(3)
Drawing 3-4, Mechanical and Topographical	(2)
Botany 1-2, General Course	(3)

JUNIOR YEAR

Chemistry 41-42, Quantitative Analysis	(3)
Botany 3-4, Plant Physiology	(3)
Geology 3-4, Mineralogy	(3)
Geology 21-22, Advanced Physiography	(3)
French 1-2, Composition and Literature	(3)

SENIOR YEAR

Chemistry 49-24, Advanced Quantitative Analysis.....	(5)
Chemistry 11-12, Industrial Chemistry	(3)
Geology 23-24, Origin and Nature of Soils	(2)
Geology 26, Soils of the United States	(1½)
Geology 27-28, Mapping	(2)
Geology 51-52, Research	(3)

COURSES OF INSTRUCTION

Only those scientific and language courses which are specifically required in the School of Applied Science are repeated here. For complete description of other courses, see page 43.

DEPARTMENT OF CHEMISTRY

[For description of Chemical Laboratories, see page 247.]

1-2. General Descriptive Chemistry: a study of the elements and their compounds, including an introduction to Organic Chemistry; lectures with laboratory work. Students with Chemistry credits may take special laboratory work in inorganic preparations. *Both terms, three hours.* Professor VENABLE, Messrs. JEFFRIES and HALL.

Laboratory fee, \$2.50 a term.

8. Inorganic Chemistry: a detailed study of the reactions of the elements and their compounds; lectures and text book. Required of Juniors in Course I; prerequisite, Chemistry 31-32 and 41-42. *Spring term, three hours.* Professor HERTY.

11-12. Industrial Chemistry: the methods and economics of chemical industries, with special reference to those industries utilizing the products of the Southern States. Required of Juniors in Courses I and V; prerequisite, Chemistry 1-2. *Both terms, three hours.* Professor HERTY.

18. History of Chemistry. Required of Seniors in Course I; prerequisite, Chemistry 61-62 and 81-82. *Spring term, two hours.* Professor VENABLE.

23-24. Research for Seniors. Required of Seniors in Course I; prerequisite, Chemistry 45-46, 47-48, 61-62, 81-82. *Both terms, five hours.* Professors HERTY, VENABLE, WHEELER, and BELL.

Laboratory fee, \$12.50 a term.

31-32. Qualitative Analysis: laboratory work with lectures.

Required of Sophomores in Courses I and V. *Both terms, two hours.* Professor WHEELER and Mr. PRITCHARD.

Laboratory fee, \$5.00 a term.

33. Qualitative Analysis. Practice is given in the qualitative analysis of known and unknown mixtures. Laboratory work with lectures. Required of Sophomores in Courses II and IV. *Fall term, three hours.* Professor WHEELER and Mr. PRITCHARD.

Laboratory fee, \$7.50.

41-42. Elementary Quantitative Analysis: laboratory work, lectures, and stoichiometric exercises; a grounding in analytical methods. Required of Sophomores in Course I and of Juniors in Course V; prerequisite, Chemistry 1-2. *Both terms, three hours.* Professor BELL.

Laboratory fee, \$7.50 a term.

44. Elementary Quantitative Analysis: a brief course in gravimetric methods, followed by a more extended course in volumetric methods. Required of Sophomores in Courses II and IV. *Spring term, two hours.* Professor BELL and Mr. PRITCHARD.

Laboratory fee, \$5.00.

45-46. Technical Quantitative Analysis: laboratory work; extension of course 41-42 along technical lines. Required of Juniors in Course I; prerequisite, Chemistry 31-32 and 41-42. *Both terms, two hours.* Professor HERTY.

Laboratory fee, \$5.00 a term.

47-48. Gas Analysis, Assaying, and Spectroscopic Analysis. Lectures and laboratory work. Required of Juniors in Course I; prerequisite, Chemistry 41-42. *Both terms, one hour.* Professor BELL.

Laboratory fee, \$2.50 a term.

61-62. Organic Chemistry. Required of Juniors in Course I; prerequisite, Chemistry 1-2, and 31-32. *Both terms, three hours.* Professor WHEELER.

Laboratory fee, \$4.00 a term.

63-64. Organic Chemistry: laboratory work, including analysis of (a) pure organic compounds, (b) food products, and (c)

commercial dye stuffs. Required of Seniors in Course I. *Both terms, two hours.* Professor WHEELER.

Laboratory fee, \$6.00 a term.

81-82. Elementary Physical Chemistry. Required of Juniors in Course I; prerequisite, Chemistry 31-32 and 41-42. *Both terms, three hours.* Professor BELL.

Laboratory fee, \$2.50 a term.

83. Physical Chemistry: lectures and text books, with laboratory work. Required of Seniors in Course I; prerequisite, Chemistry 81-82. *Fall term, three hours.* Professor BELL.

Laboratory fee, \$2.50.

84. Electro-Chemistry: theory and application of electricity to chemical processes. Required of Seniors in Course I; prerequisite, 31-32 (or 33) and 41-42 (or 44). *Spring term, three hours.* Professor BELL.

Laboratory fee, \$2.50.

The Journal Club meets fortnightly. The current journals, American, English, German, and French, both the purely scientific and technical, are reviewed by the students and instructors. Attendance is expected of students in advanced courses.

DEPARTMENT OF ELECTRICAL ENGINEERING

[For description of Electrical Engineering Laboratories, see page 245.]

5. Steam Machinery: a general elementary course in the construction, operation and use of the machinery of modern power plants, designed to give a working knowledge of the apparatus in preparation for course 34. The topics considered are the construction and operation of steam boilers, mechanical stokers, feed-pumps and feed water heaters, simple slide-valve engines, multiple-expansion engines, steam turbines and gas-engines. A brief study is made of fuels and combustion, draft, valves and valve-gears. Text: Allen and Bursley's *Heat Engines*. Required of Juniors in Courses I and II; prerequisites, Drawing 1-2 and Physics 1-2. *Fall term, two hours.* Mr. McIVER.

9-10. Generation, Transmission and Utilization of Electrical Energy. This course is designed primarily for students of Chemi-

cal and Civil Engineering, and others who desire to obtain a general practical knowledge of electrical apparatus, including direct and alternating current dynamos, transformers, motor starters and controllers, storage-batteries, and incandescent and arc lamps. Especial attention is paid to commercial applications of electric power, such as motor-drive for manufacturing purposes, electric traction and hoisting, electrical illumination, automobile and train lighting, and the transmission and distribution of power by electricity. Text: Gray's *Principles and Practice of Electrical Engineering*. Lectures, recitations and laboratory work. Required of Seniors in Courses I and III. Prerequisites, Mathematics 3-4, and Physics 1-2. *Both terms, three hours.* Mr. McIVER and Mr. OATES.

Laboratory fee, \$3.00 a term.

11-12. Elements of Electrical Engineering: a general survey of the fundamental principles of electric circuits and machinery designed to furnish a thorough preparation for advanced work in Electrical Engineering. During the first term a study is made of the underlying principles and laws of the electrostatic and the electromagnetic field, direct-current circuits and the theory, structural features and operating characteristics of direct-current machinery. The work of the second term is devoted principally to an extension of the laws of direct-current circuits to the phenomena of alternating-current circuits. The construction and operating features of alternating-current machines are also considered briefly in comparison with the corresponding direct-current equivalents. Text: Christie's *Electrical Engineering*. Required of Juniors in Course II. Prerequisites, Mathematics 3-4 and Physics 1-2, and 3-4. *Both terms, three hours.* Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$3.00 a term.

13. Theory of Electric Circuits. This is an advanced course consisting of an intensive study of the laws of the electric, magnetic and dielectric circuits based on the works of Karapetoff and Steinmetz. Emphasis is placed on the circuital relations existing in these three circuits, and the treatment of each is, so far as possible, identical. A thorough study is made of alternating-current circuits, the aim being to correlate the work with the laws of direct-current circuits in order that a proper perspective may be ob-

tained, and a standard method of treatment adopted for the study of the various types of dynamo-electric machinery. The laboratory work comprises a study of the effects of inductance and capacitance in circuits, hysteresis and eddy-currents in iron, e. m. f. wave-shapes, the electrical relations in polyphase circuits, and the effects of iron in alternating current circuits. Text: Karapetoff's *The Electric Circuit* and *The Magnetic Circuit*, and Steinmetz's *Alternating Current Phenomena*. Required of Seniors in Course II. Prerequisites Mathematics 11-12 and E. E. 11-12. *Fall term, eight hours.* Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

14. Direct and Alternating-Current Machinery. This course consists of an analytical study of the performance of electrical machines. The work is correlated closely with E. E. 18. In general are considered such questions as predetermination of e. m. f. wave-shapes of alternators; leakage-reactance of windings; exciting ampere-turns in direct-current machines, synchronous-generators, motors, converters and induction machines; armature reaction and regulation of direct-current machines and alternators. For the laboratory work a predetermination of the performance of the machine is made from the dimensions and design constants and the results are checked by actual test of the performance in the laboratory. Required of Seniors in Course II. Prerequisite, E. E. 13. *Spring term, four hours.* Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

18. Dynamo Design. A course in the principles of the design of standard electric machines. Emphasis is placed on logical analysis of the various problems, both from a theoretical point of view and in the light of commercial limitations and economic conditions involved in manufacturing. The work comprises a study of the design, construction and proportions of direct-current dynamos, alternators, induction motors, synchronous converters and transformers, and parallels closely the work in course 14. Text: Gray's *Electric Machine Design* supplemented by wide reading in the works of Hobart, Adams, Arnold and others. Required of Seniors in Course II. Must be accompanied by E. E. 14. *Spring term, four hours.* Professor DAGGETT.

21. Electric Measuring Instruments: a study of the theory, construction and methods of use of the various instruments used in electric measurements and testing:—ammeters, voltmeters, wattmeters, watthour-meters, galvanometers, potentiometers, phase and frequency meters, synchrosopes. In the laboratory a study is made of the methods of calibration, especial attention being devoted to the testing of watthour meters. Considerable attention is also given to the errors involved in measurements. Text: Jansky's *Electric Meters*. Required of Seniors in Course II. Prerequisite, E. E. 11-12. *Fall term, three hours*. Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

22. Commercial Electric Testing. This course consists principally of a laboratory study of the methods of testing electrical machinery used in commercial practice. Direct and alternating-current machines treated under the following heads: temperature tests; coreloss, friction and windage, and efficiency; voltage regulation of generators and speed regulation of motors; commutation tests and adjustment of commutating pole motors; insulation testing; methods of loading and miscellaneous tests. Text: Karapetoff's *Experimental Electrical Engineering*. Required of Seniors in Course II. Prerequisites, E. E. 13 and 21. *Spring term, three hours*. Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

31. Electric Power Transmission. A course of lectures and recitations on the design of long distance transmission lines. (a) Economic principles involved in the preliminary design and layout. (b) Electrical principles: line materials and constants; regulation; transient phenomena; insulation and lightning protection. (c) Mechanical design: sag of conductors; spans; poles and towers. Text: Still's *Overhead Electric Power Transmission*. Senior elective in Course II. Prerequisite, E. E. 11-12. *Fall term, three hours*. Professor DAGGETT.

32. Telephone and Telegraph Engineering. This course deals with the principles of the transmission of intelligence by telephone and telegraph, including a brief study of radio-telegraphy. Especial attention is given to the theory of telephonic transmis-

sion, loading coils, inductive disturbances and the layout of the telephone plant. In the laboratory study is made of standard telephone instruments, switchboards and circuits, and practice is given in the location of faults in cables and lines. Senior elective in Course II. Prerequisite E. E. 13. *Spring term, two hours.* Professor DAGGETT.

Laboratory fee, \$2.00

33. Illuminating Engineering. The work of this course begins with a study of the physics of light, including an experimental lecture by Professor Patterson, followed by lectures on the physiological and psychological aspects of the subject by Professors Manning and Chase. Considerable time is then devoted to the subject of photometry, after which a study is made of modern sources of artificial light. Finally are considered the principles of design of interior and exterior illumination, especial attention being devoted to the conservation of the eyesight, and the attainment of the highest efficiency consistent with the best artistic effect. Senior elective in Course II. Prerequisite, E. E. 11-12. *Fall term, three hours.* Professor DAGGETT.

Laboratory fee, \$3.00.

34. Electric Power Plants; a continuation of E. E. 5 from the standpoint of the choice of machines and apparatus, and the layout of the plant as a whole. Considerable attention is devoted to the electrical control apparatus and switch-gear. A brief survey is made of the organization and management of power plants, including the questions of rates and relations to the public. Text: Meyer's *Steam Power Plants*. Senior elective in Course II. Prerequisites, Physics 5-6 and E. E. 5 and 11-12. *Spring term, two hours.* Professor DAGGETT.

DEPARTMENT OF ENGLISH

1-2. Freshman English. Themes are written throughout the year; analytical outlines are prepared about twice a month; a dozen expository essays are studied in detail, with chief emphasis on the ideas contained in them. In the second term some attention is given to narration. The course aims at (1) correct writing, (2) clear thinking, and (3) thorough reading. Required of Freshmen. *Both terms, three hours.* Associate Professor FOER-

STER (Chairman); Associate Professors BOOKER and HANFORD, Messrs. DARGAN, THORNTON, MCKAY, and SECKINGER.

4. The History of English Literature. A study of representative prose and verse of the eighteenth and nineteenth centuries. The stress falls upon the actual study of literature rather than literary history, biography, or criticism, but a syllabus is used as a guide. Reports, outlines, and summaries, based on the material read, are required at frequent intervals, and class-work consists of discussions by instructors and students rather than of lectures. Required of Sophomores in Courses I, II, III, V. *Spring term, three hours.* Mr. THORNTON.

The attention of students taking this course is called to courses 6 and 7.

5. Technical Composition for Engineers: a study of the forms of scientific writing—description, exposition, directions—with the aim of developing clearness, accuracy, and logical thinking. Preparation and criticism of daily and weekly themes, and reading of illustrative literature from engineering magazines. Text-book: Sypherd's *Handbook of English for Engineers*. Required of Sophomores in Courses I, II, III, and V. *Fall term, three hours.* Mr. THORNTON.

DEPARTMENT OF GEOLOGY AND MINERALOGY

1-2. Elementary Geology: lectures with field work; laboratory work on the common minerals and rocks. Required of Sophomores in Courses II, III and V, and of Juniors in Course I. *Both terms, three hours.* Professor COBB, Messrs. BROWNSON and FEILD.

Laboratory fee, \$3.00 for the spring term.

3-4. Mineralogy: crystallography, physical and chemical properties of minerals, blowpipe analysis, determinations; lectures, laboratory, and field work: Dana's *Manual of Mineralogy* (Ford). Required of Juniors in Course V and Seniors in Course I; prerequisite, Geology 1-2 and Chemistry 1-2. *Both terms, three hours.* Mr. SMITH.

Laboratory fee, \$5.00 a term.

11-12. Economic Geology: ore deposits, coal, oil and gas, clays, building stone, cement materials, fertilizers, underground waters, etc.; occurrence, methods of exploitation, production and conservation of mineral resources; lectures, laboratory, and field work. Junior and Senior elective; prerequisite, Geology 1-2, and Chemistry 1-2. *Both terms, three hours.* Mr. SMITH.

Laboratory fee, \$1.00 a term.

21-22. Advanced course in Physiography. Senior elective; prerequisite, Geology 1-2. Required in Junior year of Course V; *Both terms, three hours.* Professor COBB.

Laboratory fee, \$2.00 a term.

23-24. Origin and Nature of Soils: field work, laboratory and theses. Students in this course are expected to keep Saturday open for field work. Required of Seniors in Course V. *Both terms, three hours.* Professor COBB.

Laboratory fee, \$3.00 a term.

26. Soils of the United States: an introductory study of the chief soil provinces, soil series, and soil areas of the United States, with special reference to the soils of North Carolina. Required of Seniors in Course V. *Spring term, two hours.* Professor COBB and Mr. HEARN.

27-28. Soil Mapping: preparation of large scale soil maps of the Chapel Hill region. Required of Seniors in Course V. *Both terms, two hours.* Professor COBB and Mr. HEARN.

31-32. Road Materials: rocks, sands, clays, asphalts, concrete, dust preventives, etc.; their properties and adaptations; laboratory and field work. Required of Juniors in Course III; prerequisite, Geology 1-2. *Both terms, one hour.* Mr. SMITH.

Laboratory fee, \$1.00 a term.

42. Mineral and Ore Deposits: lectures supplemented by laboratory and field work. *Twenty-four lectures (spring term).* Professor PRATT.

43-44. Advanced Work in Mineralogy. *One hour.* Professor PRATT.

51-52. Advanced Field Work and special research in Geology or Geography: problems and work adapted to the professional needs of the student. Students in this course are expected to keep Saturday open for field work. Required of Seniors in Course V; prerequisite, two courses in Geology. *Both terms, three hours.* Professor COBB.

The Geological Seminary meets fortnightly for review and discussion of current geological literature, and for the presentation of original papers.

DEPARTMENT OF GERMANIC LANGUAGES

A. Elementary Course: grammar, written and oral exercises; translation; sight reading. This course may be counted for entrance only. *Both terms, three hours.* Professor TOY, Associate Professor BROWN, and Assistant Professor REIN.

1-2. Translation, Sight Reading, Composition, Grammar; required of Freshmen in Courses I and V; elective in Courses II, III, IV. *Both terms, three hours.* Professor TOY and Associate Professor BROWN.

DEPARTMENT OF MATHEMATICS

Pure Mathematics

1-2. Algebra, from Quadratics through Theory of Equations (Fine's *College Algebra*); Plane and Spherical Trigonometry and Logarithms. Required of Freshmen. *Both terms, four hours.* Professor HENDERSON, Associate Professor HICKERSON, and Messrs. LASLEY and RANKIN.

3-4. Brief Course in Conic Sections: (Smith and Gale's *Analytic Geometry*); Elementary Course in Differential and Integral Calculus (Cain's *Brief Course in the Calculus*). Required of Sophomores. *Both terms, three hours.* Professors CAIN and HENDERSON.

5-6. Graphics: Descriptive Geometry; Shades, Shadows, and Elementary Perspective. Required of Juniors in Courses II and III. *Both terms, two hours.* Assistant Professor JAMES.

11-12. Calculus, Analytic Mechanics. Required of Juniors in Courses II and III; prerequisite, Mathematics 3-4. *Both terms, three hours.* Professor CAIN.

Civil Engineering

1-2. (a) Surveying (Raymond), and (b) Higher Surveying. Required of Sophomores in Courses III, and V, and of Juniors in Course II. *Both terms, two hours.* Professor STACY, Associate Professor HICKERSON, and Mr. COLLINS.

3-4. Elementary Mechanics (Loney). Required of Sophomores in Courses II and III. *Both terms, two hours.* Associate Professor HICKERSON.

9-10. Railroad Surveying and Railroad Engineering. Required of Juniors in Course III; prerequisite, C. E. 1-2. *Both terms, three hours.* Professor STACY.

11-12. Highway Location, Construction, and Maintenance. Required of Juniors in Course III. *Both terms, two hours.* Associate Professor HICKERSON.

15-16. Mechanics of Engineering. Required of Juniors in Courses II and III; prerequisite, C. E. 3-4. *Both terms, three hours.* Professor STACY.

19-20. Hydraulics and Sanitary Engineering. Required of Seniors in Courses II and III; prerequisite, Mathematics 11-12. *Both terms, three hours.* Professor STACY.

21-22. Retaining Walls and Dams; Arches. Required of Seniors in Course III; prerequisite, Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

23-24. Theory of Structures. Required of Seniors in Course III; prerequisite, C. E. 15-16. *Both terms, four hours.* Associate Professor HICKERSON.

25-26. Design of Bridges. Required of Seniors in Course III; to be taken in connection with C. E. 23-24. *Both terms, three hours.* Associate Professor HICKERSON.

Engineering Drawing

1-2. This course is designed to give the student who has never handled mathematical drawing instruments a thorough course of instruction in their use and an understanding of the elementary principles of mechanical drawing. Instruction in free-hand lettering is given in connection with the course. Text book: French's *Engineering Drawing*. Required of Freshmen in Courses I, II, III, V; Sophomore elective in Course IV. *Both terms, two hours.* Assistant Professor JAMES.

3-4. Civil Engineering Drawing: (a) land survey and topographic mapping; (b) advanced lettering: the Roman and the Gothic letters and the arrangement of lettering on maps and titles; (c) structural drawing: a study of the drawing of girders, trusses, and various minor engineering structures. Required of Sophomores in Courses III and V; prerequisite, Drawing 1-2. *Both terms, two hours.* Assistant Professor JAMES.

5-6. Machine Drawing. A study of the representation of machine parts; detail and assembly drawings from models and sketches, careful attention being given to billing of material and to standard drawing room practice and systems. The last few weeks of the course are devoted to the study of the elementary principles of mechanism and the solution of several problems based thereon. Required of Sophomores in Courses I and II; prerequisite, Drawing 1-2. *Both terms, two hours.* Assistant Professor JAMES.

11. Advanced theory and practice of perspective and its application to engineering structures. Senior elective; prerequisite, Drawing 1-2 and Mathematics 5-6. *Fall term, two hours.* Assistant Professor JAMES.

12. Stereotomy: a course in the application of descriptive geometry to the making of drawings for masonry structures, such as intersecting arches and walls, abutments, piers, and culverts: a study of warped surfaces and drawings for the helicoidal arch. Senior elective; prerequisite, Mathematics 5-6. *Spring term, two hours.* Assistant Professor JAMES.

DEPARTMENT OF PHYSICS

[For description of Physical Laboratories, see page 245.]

[For courses in Electrical Engineering, see page 52.]

A. Elementary Physics: lectures, with text-book, written reviews, laboratory work. May be counted for entrance. *Both terms, three hours.* Professor PATTERSON, Messrs. CHRISLER and CONRAD.

Laboratory fee, \$1.00 a term.

1-2. General Physics: lectures, with text-books; problems; laboratory work. Required of Sophomores; prerequisite, Mathematics 1-2. *Both terms, three hours.* Professor PATTERSON and Messrs. CHRISLER, CONRAD, SMITH, MCGEE, and EDWARDS.

Laboratory fee, \$1.50 a term.

3-4. Electricity and Magnetism: Lectures, with Laboratory Work. Required of Sophomores in Course II. *Both terms, two hours.* Professor PATTERSON.

Laboratory fee, \$2.00 a term.

5-6. Heat and Thermodynamics. Required of Juniors in Course II; prerequisite, Physics 1-2. *Both terms, two hours.* Professor PATTERSON.

DEPARTMENT OF ROMANCE LANGUAGES

French

A. Elementary Course. Direct method of instruction: Beginners' French (Walter and Ballard). Reading: *Le Français et sa Patrie* (Talbot), and other texts. This course may be counted for entrance only. *Both terms, three hours.* Professor DEY, Associate Professor TOWLES, and Mr. PARKER.

1-2. Continuation of Course A. Direct method of instruction. Reading of modern French literature. Freshman elective in Courses II, III, and IV. *Both terms, three hours.* Associate Professor TOWLES and Mr. PARKER.

SCHOOL OF EDUCATION

FACULTY

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., PRESIDENT.

MARCUS CICERO STEPHENS NOBLE, *Professor of Pedagogy and Dean of the School of Education.*

NATHAN WILSON WALKER, A. B., *Professor of Secondary Education and State Inspector of High Schools.*

HARRY WOODBURN CHASE, Ph. D., *Professor of Psychology.*

LOUIS ROUND WILSON, Ph. D., *Professor of Library Administration.*

LESTER ALONZO WILLIAMS, Pd. D., *Professor of School Administration.*

ZEBULON VANCE JUDD, A. M., *Professor of Rural Education.*

ADMISSION

Candidates for admission to the School of Education must present 14 units for unconditioned entrance. The units offered must be so selected as to conform to the requirements for entrance to any one of the three courses leading to the degree of Bachelor of Arts in the College of Liberal Arts, as stated on page 33 of the general catalogue. A complete list of the units which may be offered and the requirements in each subject will be found on pp. 32-38 of the general catalogue.

EQUIPMENT

In 1912 a gift of \$40,000 was received from the Peabody Board, to be used in the construction of a building for the School of Education. The George Peabody Building was accordingly erected, and since its completion in the summer of 1913 has afforded ample space for the work of the School. It is also the headquarters of the extension work of the University, and of the department of Applied Rural Economics and Sociology. The building, in addition to class rooms and offices, is provided with an auditorium, library room, museum, and laboratory. The library contains about 1500 works on education and psychology,

in addition to sets of the more important periodicals. The School receives all the important journals in the fields of education and psychology which are published in the country, as well as several foreign journals. The current numbers of most of these, together with the more technical works, are available for the use of advanced students in the reading room at the Peabody Building. The laboratory equipment, while limited, is sufficient for laboratory work in Educational Psychology and for work on simple research problems.

A beginning is being made of a collection for the pedagogical museum which will represent particularly the schools of North Carolina.

Ample opportunity is afforded for field and observation work, and students who desire it may be placed for a week or two at a time in various school systems in the State in order to do actual teaching under careful supervision.

COURSE LEADING TO THE DEGREE OF BACHELOR OF ARTS IN EDUCATION

In order to be recommended for the degree of Bachelor of Arts in Education, the student must have passed satisfactory examinations in all the studies in the four year's course outlined below.

The course is designed to prepare students for service as teachers, principals, and superintendents.

Freshman Year

	English 1-2(3)*
	Mathematics 1-2(4)
Select two	Greek 1-2(4)
	Latin 1-2(4)
	German 1-2(3)
	French 1-2(3)
	Chemistry 1-2(3)
	History 1-2(3)
	Education A (1)

Chemistry may be selected only by students whose other selection in this group is German. History is not required of students who select both Greek and Latin.

* Numerals in parentheses indicate the number of hours a week.

Sophomore Year

Select one	{	English 3-4 (3)
		Education 1-2 (3)
		Greek 3-4 (3)
		Latin 3-4 (3)
		German 1-2 (3)
		French 1-2 (3)
		German 21-22 (3)†
		French 3-4 (3)
		Science (3)
		Elective (3)

The three hours in Science may be selected from any of the courses in Science in the general catalogue which are open to Sophomores. Students who have pursued work in only one foreign language during Freshman year must choose a second foreign language as their elective in Sophomore year.

Junior Year

Education 41-42 (3)
 Education 51-52 (3)
 Education 53-54 (3)
 Academic Elective (8-9)

Senior Year

Education 5-6 (3)
 Education 59-60 (3)
 Education Elective (2-3)
 Academic Elective (8-9)

REGULATIONS

Candidates for the degree of Bachelor of Arts in Education will be registered for the four years of the course in the School of Education, and must pursue during Freshman year the work required in one of the three courses listed in the general catalogue which lead to the degree of Bachelor of Arts, with the exception of Public Speaking. In addition, candidates must pursue Education A in Freshman year. In Sophomore year, Education 1-2 must be pursued, and students may, by proper use of their elective hours, carry all the required work in one of the three courses leading to the degree of Bachelor of Arts.

† German 23-24 or 25-26 may be substituted in place of 21-22.

Sophomores registered in the School of Education must, by May 15th of their Sophomore year, hand to the Registrar a list of the Academic Electives chosen for the work of Junior year (eight to nine hours). These electives are to be chosen from the courses in the general catalogue which are open to Juniors. None of the courses offered in the School of Education may be elected to satisfy this requirement. One course must be chosen from the work offered in each of the three general divisions under which the various departments are grouped in the general catalogue. No election will be accepted by the Registrar which has not been approved by the Dean of the School of Education, and by Professor Chase.

Juniors registered in the School of Education must, by May 15th of their Junior year, hand to the Registrar a list of the subjects selected by them for the work of Senior year (two to three hours in Education, eight to nine hours from courses in the general catalogue open to Seniors). One course must be chosen from a department elected in Junior year, the remaining hours are free election in any division, except that no additional work in Education may be elected. No election will be accepted by the Registrar which has not been approved by the Dean of the School of Education and by Professor Chase.

COURSES OF INSTRUCTION

THE SCIENCE AND PRACTICE OF EDUCATION

A. Introduction to Education. The aim of this course is to introduce the student to a few of the main problems and fundamental principles in the field of education. Lectures will be given by the various members of the faculty of the School of Education. Lectures, assigned readings. Required of Freshmen in the School of Education; not open to Academic students. *Both terms, one hour.*

1-2. Principles and Methods of Elementary Education. A course for teachers in elementary and grammar grades and for principals and superintendents. A careful study of the principles underlying the successful teaching of elementary branches in the best public and private schools; the preparation of written model lessons for the grades; observation and criticism of teaching and occasional observation of teaching in the village school. Required of Sophomores in the School of Education; not open to Academic students. *Both terms, three hours.* Professor NOBLE.

3. Theory and Practice of Education. A study of the theory and practice of modern education from the view-point of both the teacher and the citizen; the selection of the material of instruction; the development and arrangement of the curriculum for the grammar school and High School. Lectures, text-books, and assigned readings. Junior and Senior elective. *Fall term, three hours.* Professor NOBLE.

5-6. Schoolroom Observation and Methods: a study of classroom instruction and discipline on the bases of text-book theory and actual observation in a large and in a small school system. Such topics as the most efficient size of classes and sections, disciplinary devices, value of drill work, applied psychology, methods used in the various subjects of study, assigning of new lessons, etc., will be considered. Text-books, lectures, school visitations. Required of Seniors in the School of Education; not open to Academic students. *Both terms, three hours plus one hour of observation.* Professor WILLIAMS.

7-8. Rural School Curricula. The content and organization of courses of study for country schools will constitute the considerations of this course. An effort will be made to formulate the chief sociological demands of country life and to mark out courses of study suitable to typical social and industrial situations. Concrete contributions of normal schools and schools of education in the leading colleges and universities and of specialists in education will be studied. Reports on first hand investigations, and specimen curricula will be required. Graduate course, open to Seniors. *Both terms, two hours.* Professor JUDD.

See also course 51-52, which in the spring term is largely concerned with high school methods.

HISTORY OF EDUCATION

22. The General History of Education. A brief general history of education; the development of educational theories in the past; the effect of the pedagogical doctrines of the great educators of the past upon modern educational systems. Lectures, textbooks, parallel readings, theses. Junior and Senior elective. *Spring term, three hours.* Professor NOBLE.

23-24. Current Education. A study of present educational tendencies and practice as seen in typical country and city school systems and in the development and supervision of the American public school of today. For teachers who wish to prepare for service as principals and superintendents. Lectures, text-books, research, and theses. Junior and Senior elective. *Both terms, two hours.* Professor NOBLE.

25-26. Modern Educational Theorists: a comparative study of modern theories in education as revealed by writers on the topic from the Renaissance to the present time. Present problems in education will be studied in the light of their past. Lectures, discussions, reports. Junior and Senior elective. *Both terms, two hours.* Professor WILLIAMS.

27-28. American Education. A brief study of the more prominent State school systems; a comparative study of the purpose and progress of education in the different sections of the Union. Lectures, text-books, assigned readings, and theses. Graduate course open to Seniors. *Both terms, two hours.* Professor NOBLE.

EDUCATIONAL PSYCHOLOGY

41-42. Introduction to Educational Psychology. This course will deal with the psychological principles which underly the learning process. Topics treated will be the nature and educational importance of instinct, habit formation, attention and interest, the acquisition of knowledge, attitudes, ideals, action, the emotional life. Lectures, readings, class exercises. Sophomore, Junior, and Senior elective; required of Juniors in the School of Education. *Both terms, three hours.* Professor CHASE.

44. Laboratory course in Educational Psychology. The laboratory work will deal with such topics as habit formation, memory, economical methods of learning, the transfer of training, and some of the simpler mental tests, and will be supplemented by lectures. Junior and Senior elective; open only to students who have completed the fall term of Education 41-42, or of Philosophy 1-2. *Spring term, three hours.* Professor CHASE.

Laboratory fee, \$2.00.

45-46. Seminar in Educational Psychology. An intensive study of special problems in the field of educational psychology. The topics considered will vary somewhat from year to year, in accordance with the interests of the class. A minor piece of original work will be required of each student. A reading knowledge of French and German, while not required, is desirable. Prerequisite, Education 41-42, or Philosophy 1-2. Education 44 is also an advised prerequisite. The course is open only to graduate students. Students from other institutions who register in the Graduate School must secure the permission of the instructor before electing the course. *Both terms, two hours.* Professor CHASE.

The attention of students in Educational Psychology is called to courses 1-2 (Introduction to Psychology) and 3-4 (Genetic Psychology) in the Department of Philosophy.

EDUCATIONAL ADMINISTRATION AND SUPERVISION

51-52. High School Organization and Administration: a study of the American high school, its evolution, organization, administration, function, and problems. Special emphasis will be laid on the state high school in North Carolina. The course looks toward preparation to meet the State requirements for high

school teachers. Text-books, lectures, assigned readings. Junior and Senior elective; required of Juniors in the School of Education. *Both terms, three hours.* Professor WILLIAMS.

53-54. Rural School Administration. This course will offer a comparative study of State and Country school systems, as affecting rural schools. Particular attention will be paid to methods of raising and apportioning school funds; to the various types of schools; to the most effective division of the county into districts for school purposes; to school architecture; to school hygiene; to methods of licensing and appointing teachers; to qualifications, powers and duties of school officials; and to associated and philanthropic agencies. This course will be conducted with particular reference to the needs of those expecting to become principals and superintendents. Lectures, textbooks, readings, conferences, and first-hand study of the work of county school systems. Junior and Senior elective; required of Juniors in the School of Education. *Both terms, three hours.* Professor JUDD.

55-56. Educational Sociology. The social and industrial character of present-day country life and the district, village and town school as its chief institution will be the concerns of this course. The chief problems of the home, the farm, and the associational life of the community will be discussed. The country school evolved in the endeavor to offer solutions to these problems will be defined. Text-book and supplementary readings. Junior and Senior elective. *Both terms, two hours.* Professor JUDD.

57-58. Rural Educational Practice. It will be the purpose of this course to acquaint the student with the best practice found in our rural schools. A survey of the work of some of the better district, village and town schools of the United States will be made. Special features will be noted and an attempt made to evaluate them in the terms of the environs and the demands upon one's own school. The teacher's relation to the larger phases of school development and the daily problems arising in and about the school will receive attention. Bulletins from the United States Bureau of Education and from the various state departments of education and other special publications will be read. Junior and Senior elective; not open to academic students. *Both terms, two hours.* Professor JUDD.

59-60. School Supervision. The principal topics considered in this course will be: supervisory officers,—the county superintendent and special supervisors; general plan of supervision,—training of teachers in service, schoolroom visits, aids to teachers; observation and criticism of the process of instruction,—standards of the recitation, application of these standards as modified by local conditions, preparation of the recitation by teachers and pupils, conference with teachers, demonstration teaching by supervisor. Text-books, lectures, readings, conferences, visits to rural schools. Required of Seniors in the School of Education; not open to academic students. *Both terms, three hours.* Professor JUDD.

61-62. Administration: a study of state and county educational reorganization. The larger problems of necessary state, county and city officers of education, their powers and duties, the sources of income and distribution of expenditures for schools, the units of efficient organization in large and small school systems, etc., will be carefully studied in detail. Text-book, discussions, assigned readings. Graduate course, open to Seniors. *Both terms, two hours.* Professor WILLIAMS.

63-64. Administrative Problems: a seminar course devoted to a detailed study of administrative and supervisory problems arising in a school or system of schools. Discussions, reports, theses. Graduate course, open to Seniors in the School of Education: prerequisite, Education 51-52. Not open to Academic students. *Both terms, two hours.* Professor WILLIAMS.

GRADUATE COURSES

Courses 7-8, 27-28, 45-46, 61-62, 63-64, are ranked as graduate courses. Courses in the School of Education which are open to Juniors and Seniors may be elected by graduate students when such election is in conformity with the regulations of the Graduate School. Courses in the School of Education which are of Junior and Senior grade but not open to Academic students may be elected by graduate students who intend to teach and who major in other departments, subject to the regulations of the Graduate School, and provided the consent of the instructor giving the chosen course is secured. Students electing graduate courses in the School of Education should consult Professor Chase before registering for such courses.

For the complete list of courses in Education offered to graduates, and the requirements for the degree of Master of Arts, see the announcement of the Graduate School.

LIBRARY ADMINISTRATION

1-2. School Library Administration: a study of the principles and practical management of school libraries, preparation of debates and debate references, reference books, reading courses and children's readings, book selection and ordering, classification and cataloguing, technical methods, practice in the University library. Junior and Senior elective. Open only to library assistants and those preparing to become library assistants, or to those who take Education 3, or Education 51-52, or Education 53-54. *Both terms, two hours.* Professor WILSON.

COURSES FOR TEACHERS

The attention of students in the School of Education is called to the courses for teachers offered by the departments of Latin, German, and Zoology, and to the work offered by the Professor of Applied Rural Economics and Sociology.

THE GRADUATE SCHOOL

COMMITTEE

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., PRESIDENT.
CHARLES LEE RAPER, Ph. D., DEAN.
HARRY WOODBURN CHASE, Ph. D.
EDWIN GREENLAW, Ph. D.

FACULTY

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., *Francis Preston Venable Professor of Chemistry.*
WALTER DALLAM TOY, M. A., *Professor of the Germanic Languages and Literatures.*
WILLIAM CAIN, A. M., *Professor of Mathematics.*
HENRY HORACE WILLIAMS, A. M., B. D., *Professor of Philosophy.*
HENRY VAN PETERS WILSON, Ph. D., *Professor of Zoology.*
COLLIER COBB, A. M., *Professor of Geology and Mineralogy.*
MARCUS CICERO STEPHENS NOBLE, *Professor of Pedagogy.*
GEORGE HOWE, Ph. D., *Professor of the Latin Language and Literature.*
CHARLES HOLMES HERTY, Ph. D., *Professor of General and Industrial Chemistry.*
CHARLES LEE RAPER, Ph. D., *Professor of Economics.*
WILLIAM CHAMBERS COKER, Ph. D., *Professor of Botany.*
ARCHIBALD HENDERSON, Ph. D., *Professor of Pure Mathematics.*
JOSEPH GREGOIRE DE ROULHAC HAMILTON, Ph. D., *Alumni Professor of History.*
ANDREW HENRY PATTERSON, A. M., *Professor of Physics.*
HENRY MCGILBERT WAGSTAFF, Ph. D., *Professor of History.*
WILLIAM MORTON DEY, Ph. D., *Professor of the Romance Languages and Literatures.*
MARVIN HENDRIX STACY, A. M., *Professor of Civil Engineering.*
CHARLES WESLEY BAIN, M. A., LL. D., *Professor of Greek.*
HARRY WOODBURN CHASE, Ph. D., *Professor of Psychology.*

ALVIN SAWYER WHEELER, Ph. D., *Professor of Organic Chemistry.*

PARKER HAYWARD DAGGETT, S. B., *Professor of Electrical Engineering.*

JAMES MUNSIE BELL, Ph. D., *Professor of Physical Chemistry.*

EDWIN GREENLAW, Ph. D., *Professor of English.*

LESTER ALONZO WILLIAMS, A. M., Pd. D., *Professor of School Administration.*

EUGENE CUNNINGHAM BRANSON, A. M., *Professor of Rural Economics and Sociology.*

ZEBULON VANCE JUDD, A. M., *Professor of Rural Education.*

THOMAS JAMES WILSON, JR., Ph. D., *Associate Professor of Latin.*

WILLIAM STANLY BERNARD, A. M., *Associate Professor of Greek.*

OLIVER TOWLES, Ph. D., *Associate Professor of the Romance Languages.*

THOMAS FELIX HICKERSON, A. M., S. B., *Associate Professor of Civil Engineering.*

KENT JAMES BROWN, Ph. D., *Associate Professor of German.*

NORMAN FOERSTER, A. M., *Associate Professor of English.*

JAMES HOLLY HANFORD, Ph. D., *Associate Professor of English.*

ORETTES PEARL REIN, Ph. D., *Assistant Professor of German.*

JOHN ELIPHALET SMITH, B. S., *Instructor in Geology.*

CANDIDATES FOR GRADUATE WORK

Graduates of the University of North Carolina and of other universities and colleges of good standing are, upon application to the President or Dean, ordinarily admitted to advanced courses of instruction free of charge for tuition. There is, however, a registration fee of fifteen dollars for each term. An applicant for admission, unless a graduate of the University of North Carolina, is required to present his diploma and a certificate of scholarship and character. If in any department the preliminary training of candidates has not been sufficient to qualify them for strictly graduate work, they will be required to take such undergraduate courses as may be prescribed by the head of the department; but these courses will

not be counted for hours in work leading to a graduate degree.

Students who are not graduates may, if they prove themselves qualified, take graduate courses; but no graduate degree will be given a student who does not already hold a Bachelor's degree from some institution of approved standing.

All courses must be approved by the President or Dean.

DEGREES

The University offers to graduate students advanced work leading to the degrees of Master of Arts (A. M.), Master of Science (S. M.), and Doctor of Philosophy (Ph. D.).

MASTER OF ARTS

Candidates for the degree of Master of Arts must complete satisfactorily one year of study consisting of at least fifteen hours a week of recitations or lectures, eight hours of which must be taken from courses in the Graduate School, the remaining seven from courses in the Graduate School or from undergraduate courses open to Juniors and Seniors. The candidate must select one major subject, to which he shall devote at least half of his time, and one allied minor subject. He may, with the approval of the Dean and of the professor in charge of his major subject, select a second minor subject. He shall be required to have a reading knowledge of French and German in case the professor in charge of his major subject thinks it necessary for efficient work. The course as a whole must have unity and must be pursued with definite aim.

A thesis based on the major subject of study and showing capacity for original research must be submitted on or before May 1 of the given year, and must be filed in typewritten form on or before May 15.

MASTER OF SCIENCE

The degree of Master of Science is conferred under conditions similar to those stated above for the degree of Master of Arts.

DOCTOR OF PHILOSOPHY

A candidate for the degree of Doctor of Philosophy is required to pursue, in residence at the University, a prescribed course of advanced study and research in one major subject and two allied minor subjects. In general a term of three years is required, but the degree may be secured in two years in the case of exceptional preliminary training in the major subject.

These requirements of residence and study are, however, entirely secondary. The degree is conferred not simply for faithful study in a determinate field of work for a prescribed period, but because of a high attainment in a special branch of learning, which the candidate must have manifested not only in examination, but by a thesis which gives evidence of independent research and contributes to knowledge. The thesis must be accepted before the candidate may be admitted to examination. The examinations are both written and oral. They demand a minute knowledge of a special field of work as well as a general acquaintance with the department of learning in which the candidate offers himself for the degree. The candidate must also give proof of his ability to read French and German.

COURSES OF INSTRUCTION

DEPARTMENT OF BOTANY

[For description of Biological Laboratories, see page 249.]

3-4. Physiology: a general course in plant physiology; lectures with laboratory and field experiments. Open to Juniors and Seniors. *Both terms, three hours.* Professor COKER and Mr. TOTTEN.

5-6. Special Morphology of the Algæ and Fungi, with attention to the culture of lower fungi, and the identification of mushrooms; lectures with laboratory and field work. Open to Juniors and Seniors. *Both terms, three hours.* Professor COKER and Mr. TOTTEN.

7-8. Plant Morphology: advanced work in the embryology and anatomy of plants. The student is required to collect and prepare material for the microscopic study of special problems. Theses. *Both terms, five hours or more.* Professor COKER.

DEPARTMENT OF CHEMISTRY

[For description of Chemical Laboratories, see page 247.]

25-26. Advanced Inorganic Chemistry. Seminar course: readings and discussions of recent advances in inorganic chemistry. *Both terms, two hours.* Professor HERTY.

27-28. Research in Inorganic, Analytical, and Industrial Chemistry. This course (with 77-78 and 97-98) is intended only for applicants for the degree of Doctor of Philosophy or properly equipped students who desire special training in advanced chemical research. It requires, in addition to the laboratory work, daily conference with the professor and continual reference to the literature touching the matter under investigation. The work is usually assigned by the professor, but by special permission the student may elect to work upon problems to which he wishes to give particular attention. *Both terms, six hours.* Professors HERTY and VENABLE.

Laboratory fee, \$15.00 a term.

75-76. Advanced Organic Chemistry: Seminar Course; readings and discussions; a study of class reactions with reference to their application to organic research is taken up, and special attention is given to the most important modern investigations. *Both terms, two hours.* Professor WHEELER.

77-78. Research in Organic Chemistry. The statements made in regard to course 27-28 apply also to this course. *Both terms, six hours.* Professor WHEELER.

Laboratory fee, \$15.00 a term.

95-96. Advanced Physical Chemistry. Seminar Course; readings and discussions of recent advances in physical chemistry. *Both terms, two hours.* Professor BELL.

97-98. Research in Physical Chemistry. The statements made in regard to course 27-28 apply also to this course. *Both terms, six hours.* Professor BELL.

Laboratory fee, \$15.00 a term.

The *Journal Club* meets fortnightly. The current journals, American, English, German, and French, purely scientific and technical, are reviewed by the students and instructors. Attendance upon the meetings of the Club is expected of all students taking the above courses.

DEPARTMENT OF ECONOMICS

9-10. Economic Institutions and Thought in England and the United States: a general study, largely from the historical point of view, of the economic institutions and the systems of economic thought in England and the United States; a special study of socialism. Lectures, readings, and reports; Cheyney's *Industrial and Social History of England*, Brooks' *The Social Unrest*, Spargo's *Socialism*, and the *Communist Manifesto* (Marx and Engels). Open to Seniors. *Both terms, two hours.* Professor RAPER.

13-14. Public Finance: a general study of principles which are involved in the revenues and expenditures of the State, and in the relation of the State to the industries of its citizens; a special study of taxation, local, state, national. Lectures, readings, and reports; Adams' *The Science of Finance*. Open to Seniors. *Both terms, two hours.* Professor RAPER.

Given in alternate years; to be omitted in 1915-1916.

DEPARTMENT OF RURAL ECONOMICS AND SOCIOLOGY

3. Laboratory Courses in Rural Economics and Sociology; home-county and home-state studies, researches, and surveys. Professor BRANSON.

DEPARTMENT OF EDUCATION

7-8. Rural School Curricula. The content and organization of courses of study for country schools will constitute the considerations of this course. An effort will be made to formulate the chief sociological demands of country life and to mark out courses of study suitable to typical social and industrial situations. Concrete contributions of normal schools and schools of education in the leading colleges and universities and of specialists in education will be studied. Reports on firsthand investigations, and specimen curricula will be required. Open to Seniors. *Both terms, two hours.* Professor JUDD.

27-28. American Education. A brief study of the more prominent State school systems; a comparative study of the purpose and progress of education in the different sections of the Union. Lectures, text-books, assigned readings, and theses. Open to Seniors. *Both terms, two hours.* Professor NOBLE.

45-46. Seminar in Educational Psychology. An intensive study of special problems in the field of educational psychology. The topics considered will vary somewhat from year to year, in accordance with the interest of the class. A minor piece of original work will be required of each student. A reading knowledge of French and German, while not required, is desirable. Prerequisite, Education 41-42, or Philosophy 1-2. Education 44 is also an advised prerequisite. The course is open only to graduate students. Students from other institutions who register in the Graduate School must secure the permission of the instructor before electing the course. *Both terms, two hours.* Professor CHASE.

61-62. Administration: a study of state and county educational re-organization. The larger problems of necessary state, county and city officers of education, their powers and duties, the sources of income and distribution of expenditures for schools, the units of efficient organization in large and small

school systems, etc., will be carefully studied in detail. Text-book, discussions, assigned readings. Open to Seniors. *Both terms, two hours.* Professor WILLIAMS.

63-64. Administrative Problems: a seminar course devoted to a detailed study of administrative and supervisory problems arising in a school or system of schools. Discussions, reports, theses. Graduate course, open to seniors in the School of Education; prerequisite, Education 51-52. Not open to Academic students. *Both terms, two hours.* Professor WILLIAMS.

DEPARTMENT OF ELECTRICAL ENGINEERING

[For description of Electrical Engineering Laboratories, see page 245.]

13. Theory of Electric Circuits. This is an advanced course consisting of an intensive study of the laws of the electric, magnetic and dielectric circuits based on the works of Karapetoff and Steinmetz. Emphasis is placed on the circuital relation existing in these three circuits, and the treatment of each is, so far as possible, identical. A thorough study is made of alternating-current circuits; the aim being to correlate the work with the laws of direct-current circuits in order that a proper perspective may be obtained, and a standard method of treatment adopted for the study of the various types of dynamo-electric machinery. The laboratory work comprises a study of the effects of inductance and capacitance in circuits, hysteresis and eddy-currents in iron, e. m. f. wave-shapes, the electrical relations in polyphase circuits, and the effects of iron in alternating current circuits. Texts: Karapetoff's *The Electric Circuit* and *The Magnetic Circuit*, and Steinmetz's *Alternating Current Phenomena*. Open to Seniors. Prerequisites Mathematics 11-12 and E. E. 11-12. *Fall term, eight hours.* Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

14. Direct and Alternating-Current Machinery. This course consists of an analytical study of the performance of electrical machines. The work is correlated closely with E. E. 18. In general are considered such questions as predetermination of e. m. f. wave-shapes of alternators; leakage-reactance of windings; exciting ampere-turns in direct-current machines, synchro-

nous-generators, motors, converters, and induction machines; armature reaction and regulation of direct-current machines and alternators. For the laboratory work a predetermination of the performance of the machine is made from the dimensions and design constants and the results are checked by actual test of the performance in the laboratory. Open to Seniors. Prerequisite, E. E. 13. *Spring term, four hours.* Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

18. **Dynamo Design.** A course in the principles of the design of standard electric machines. Emphasis is placed on logical analysis of the various problems, both from a theoretical point of view and in the light of commercial limitations and economic conditions involved in manufacturing. The work comprises a study of the design, construction and proportions of direct-current dynamos, alternators, induction motors, synchronous-converters and transformers, and parallels closely the work in course 14. Text: Gray's *Electric Machine Design*, supplemented by wide reading in the works of Hobart, Adams, Arnold and others. Open to Seniors. Must be accompanied by E. E. 14. *Spring term, four hours.* Professor DAGGETT.

21. **Electric Measuring Instruments:** a study of the theory, construction and methods of use of the various instruments used in electric measurements and testing:—ammeters, voltmeters, wattmeters, watthour meters, galvanometers, potentiometers, phase and frequency meters, synchrosopes. In the laboratory a study is made of the methods of calibration, especial attention being devoted to the testing of watthour meters. Considerable attention is also given to the errors involved in measurements. Text: Jansky's *Electric Meters*. Prerequisites, E. E. 11–12. *Fall term, three hours.* Professor DAGGETT and Messrs. McIVER and OATES.

Laboratory fee, \$5.00.

41–42. **General Electrical Engineering.** An advanced course in electrical theory, including the study of distributed inductance and capacity, transient phenomena, e. m. f. wave-shapes in alternators and synchronous converters and the application of hyperbolic functions to the solution of problems in power trans-

mission and telephone circuits. The work will be covered by lectures, reports on assigned reading and problems. Texts: Steinmetz's *Electric Discharges, Waves and Impulses*, and Kennelly's *The Application of Hyperbolic Functions to the Solution of Electrical Engineering Problems*. Prerequisites, E. E. 13, 14, 31 and 32, and Mathematics 10 or 15-16. *Both terms, three hours.* Professor DAGGETT.

51-52. Electrical Engineering Research and Design. The solution of one or more definite problems in some particular field of Electrical Engineering. The work of this course will be outlined, as far as possible, to suit the needs of the individual student, and will consist of original investigations, designs, or the economic study of some existing electric power plant. This course presupposes the completion of the work for the degree of S. B. in Electrical Engineering. *Both terms, three to six hours.* Professor DAGGETT.

DEPARTMENT OF ENGLISH

The following courses are divided into three groups. Group I, which includes courses 37-38, 41-42, 45-46, is made up of courses intended primarily for undergraduates, but these courses may be counted for graduate credit providing certain additional work, such as a thesis, be submitted and approved. In case a student desires to offer a course from this group for graduate credit, it will be necessary for him to arrange with the instructor, before October first, a plan of such additional work. Not more than two of the courses in this group may be offered for graduate credit in any one year. Group II, which includes courses 71-76, is made up of courses open to graduates and undergraduates on the same terms. The attention of students electing courses in this group is called to the following related courses in other departments: Latin 53-54, German 61-62, French 23-24. Group III, consisting of courses 81-84, is designed primarily for graduates.

A reading knowledge of French and German, to be tested by an examination, is prerequisite to admission to candidacy for the degree of Doctor of Philosophy in the Department of English, and German 61-62 and French 23-24 are counted among the requirements for the degree.

37-38. The Elizabethan Drama. A brief study of the beginnings of the English drama, followed by an intensive study of the period from Lyly to the closing of the theatres. While particular attention is paid to Shakespeare, it is also the purpose of the course to study his work in connection with that of his contemporaries. The development of the dramatic technique, the Elizabethan conceptions of tragedy and comedy as distinguished from those of classical or of recent times, and the relation of the drama to certain phases of Renaissance thought, are studied through the reading of a considerable number of plays. Open to Juniors and Seniors. *Both terms, three hours.* Professor GREENLAW.

41-42. English Literature in the Age of Elizabeth. A study of the types of literature, except the drama: the sonnets and other lyrical poetry; the pastoral; the epic; prose fiction; the essay. Attention is given to the relation between English and continental literature in the Renaissance. The first term is devoted to the study of poetry, with Spenser as the basis; the second term is concerned chiefly with literary criticism and with the study of Bacon. Open to Juniors and Seniors. *Both terms, three hours.* Professor GREENLAW.

45-46. The Classical Tradition in English Literature. This course is concerned with the influence of classical models and ideals on English literature, primarily in the sixteenth, seventeenth, and eighteenth centuries. The work of the first term will center in Milton as the culmination of English classicism; the second term will be devoted chiefly to the study of Dryden, Pope, Johnson, and other representatives of the pseudo-classicism of the Restoration and the Augustan Age. Open to Juniors and Seniors. *Both terms, three hours.* Associate Professor HANFORD.

71-72. Old and Middle English. In the first term a careful study is made of Old English grammar and syntax; a large amount of easy prose is read. In the second term the grammatical work and the reading are carried on into the Middle English period, with special attention to Chaucer. The aim of the course is to acquaint the student with the main facts of the beginning and development of the English language, and to introduce him

to the study of early English literature. The language of the older periods is considered in its relation to present-day English; many points of confusion in modern English, unexplained by the rules of logical grammar, are made clear. Open to Juniors and Seniors. *Both terms, three hours.* Associate Professor HANFORD.

73-74. Old and Middle English: Advanced Course. The work of the first term continues the study of Old English grammar, particularly in its relation to that of the other Indo-European languages, but the major part of the term is devoted to the reading of Beowulf. In the second term the study of Chaucer begun in course 71-72 will be continued. Open to Seniors. *Both terms, two hours.* Associate Professor HANFORD.

75-76. History of the English Language. This course supplements courses 71-74. It will trace the growth of the English language from its beginnings in England until today. Open to Juniors and Seniors. *Both terms, two hours.*

This course is omitted in 1914-1915.

81-82. Seminar in the Teaching of English. This course will deal primarily with the teaching of both literature and composition in the high school, and secondarily with the teaching of Freshman English in the college. Ordinarily it is a requirement for the Master's degree in English. *Both terms, one or two hours.* Associate Professor FOERSTER.

83-84. Seminar. This course is designed as a general introduction to the higher study of English. A special period of literature, or a special literary form, or a single writer, is chosen for the topic of the course. The method of study includes a considerable amount of parallel reading in connection with the general topic; a study of some elementary problems in research; the presentation of brief oral or written reports on some phase of the subject, and, in the second term, the writing of a thesis. *Both terms, three hours.* Professor GREENLAW

DEPARTMENT OF GEOLOGY

[For description of Geological Laboratories, see page 250.]

11-12. Economic Geology: ore deposits, coal, oil and gas, clays, building stones, cement materials, fertilizers, underground

waters, etc.; occurrence, methods of exploitation, production, and conservation of mineral resources; lectures, laboratory, and field work. Open to Juniors and Seniors; prerequisite, Geology 1-2 and Chemistry 1-2. *Both terms, three hours.* Mr. SMITH.

Laboratory fee, \$1.00 a term.

13-14. Petrography: rocks and rock minerals, optical mineralogy, crystallography, etc.; lectures, laboratory work, and theses. Open to Juniors and Seniors. *Both terms, three hours.* Mr. SMITH.

Laboratory fee, \$3.00 a term.

23-24. Origin and Nature of Soils: field work, laboratory work, and theses. Students in this course are expected to keep Saturday open for field work. Junior and Senior elective; prerequisite, Geology 1-4, Chemistry 1-2 and 31-32, Botany 1-2. *Both terms, three hours.* Professor COBB.

Laboratory fee, \$3.00 a term.

51-52. Advanced Field Work and Special Research, in Geology and Geography: problems assigned individually and work adapted to the professional needs of the student. Students in this course are expected to keep Saturday open for field work. Open to Seniors. *Both terms, three hours.* Professor COBB.

55-56. Research Course in Historical Geology. *Both terms, three hours.* Professor COBB.

DEPARTMENT OF GERMANIC LANGUAGES

41-42. Goethe: Goetz von Berlichingen, Werther's Leiden, Tasso, Dichtung und Wahrheit, Hermann und Dorothea. Lectures on Goethe's life and work. Selected chapters of Scherer's *History of German Literature*, Francke's *History of German Literature*, and Bielschowsky's *Goethe, Sein Leben und Seine Werke* will be read. Open to Juniors and Seniors; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, two hours.* Associate Professor BROWN.

This course may be elected only after consultation with the instructor.

43-44. Goethe's Faust, Parts I and II. Open to Juniors and Seniors; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, two hours.* Professor TOY.

This course may be elected only after consultation with the instructor.

45-46. Kleist and Hebbel. Translation and interpretation of selected dramas; lectures and collateral reading. Open to Juniors and Seniors; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, two hours.* Associate Professor BROWN.

61-62. Gothic: Braune's *Gotische Grammatik*; selected parts of Paul's *Grundriss der Germanischen Philologie*. This course is intended to lay the foundation for the philological study of the German dialects. Open to Juniors and Seniors; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, three hours.* Professor TOY.

63-64. Old High German: Braune's *Althochdeutsche Grammatik*; Braune's *Althochdeutsches Lesebuch*. Open to Juniors and Seniors; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, two hours.* Professor TOY.

65-66. Introduction to Old Saxon. Holthausen's *Altsächsisches Elementarbuch*. Heliand (Behaghel). Prerequisite, German 21-22 or 23-24 or 25-26 and English 71-72. *Both terms, two hours.* Assistant Professor REIN.

67-68. Middle High German: Paul's *Mittelhochdeutsche Grammatik*; Bachmann's *Mittelhochdeutsches Lesebuch*; translation into New High German. Open to Juniors and Seniors; prerequisite, German 21-22 or 23-24 or 25-26. *Both terms, three hours.* Assistant Professor REIN.

DEPARTMENT OF GREEK

7. Prose Composition: advanced course. *Fall term, two hours.* Professor BAIN.

31-32. Greek Drama: Euripides, Iphigenia Among the Taurians; Sophocles, Ædipus Tyrannus; Æschylus, Agamemnon; Aristophanes, Wasps; Aristotle, Poetics. Open to Juniors and Seniors. *Both terms, three hours.* Professor BAIN.

35-36. Greek History: the selections from Greek historians in Parts I and II of Baumeister's *Quellenbuch zur Alten Geschichte*. *Both terms, two hours.* Professor BAIN.

37-38. Bucolic Poetry: the Idylls of Theocritus, Bion, and Moschus. *Both terms, two hours.* Associate Professor BERNARD.

39-40. Critical Study of Special Authors: with lectures on Classical Greek Syntax, metres, dialects, oral and written translation into Greek, the history of Athens from the battle of the Arginusæ to the Restoration of the Democracy. *Both terms, three hours.* Professor BAIN.

52. Greek Epigraphy and Palæography: a brief introduction to the study of Greek inscriptions and manuscripts, lectures and reports. *Spring term, two hours.* Professor BAIN.

The attention of students electing this course is called to course 51 in the Latin Department.

DEPARTMENT OF HISTORY

19-20. Civil War and Reconstruction: a detailed study of the constitutional, political, and economic phases of the period of the Civil War and Reconstruction; lectures, readings, and reports. Open to Seniors. *Both terms, two hours.* Professor HAMILTON.

27-28. The American Constitution: research in the history of the Constitution of the United States. *Both terms, two hours.* Professor WAGSTAFF.

29-30. American Politics: research in the history of political parties of the United States. *Both terms, two hours.* Professor HAMILTON.

DEPARTMENT OF LATIN

35-36. Roman Elegiac Poets: rapid reading of selected elegies of Catullus, Tibullus, Propertius, and Ovid; a study of the lives of the elegists; the history of Greek and Roman elegy. Open to Juniors and Seniors. *Both terms, three hours.* Professor HOWE.

This alternates with course 37-38; to be given in 1915-1916.

37-38. The Latin Epic: Vergil will be the central theme of this course, but the development of the Latin Epic will be treated historically and illustrative readings in other poets will be assigned. Open to Juniors and Seniors. *Both terms, three hours.* Professor HOWE.

This course alternates with course 35-36; to be omitted in 1915-1916.

45-46. The Study of a Particular Author or Period in Roman Literature: practice in rapid reading, with translation of the more difficult passages only. *Both terms, two hours.* Professor HOWE.

51. Latin Epigraphy and Palæography: a brief introduction to the study of Latin inscriptions and manuscripts; lectures and reports. *Fall term, two hours.* Professor HOWE.

The attention of students electing this course is called to course 52 in the Department of Greek.

55-56. Lectures on Comparative Syntax of Greek and Latin: principles illustrated from Homer and Terence. *Both terms, two hours.* Associate Professor WILSON.

DEPARTMENT OF MATHEMATICS

Pure Mathematics

11-12. Calculus; Analytic Mechanics. Open to Juniors and Seniors; prerequisite, Mathematics 3-4. *Both terms, three hours.* Professor CAIN.

13-14. Theory of Equations (Burnside and Panton). Open to Juniors and Seniors. *Both terms, three hours.* Professor HENDERSON.

15-16. Differential Equations (Murray). Open to Seniors. *Both terms, three hours.* Professor HENDERSON.

17-18. Advanced Differential and Integral Calculus. Prerequisite, Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

19-20. Vector Analysis. Prerequisite, Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

21-22. Modern Synthetic Geometry. Text: Russell. Prerequisite, Mathematics 11-12. *Both terms, three hours.* Professor HENDERSON.

23-24. Modern Analytic Geometry. Text: Smith, C. Prerequisite, Mathematics 11-12. *Both terms, three hours.* Professor HENDERSON.

25-26. Analytic Geometry of Space: Text: C. Smith. Prerequisite, Mathematics 3-4. *Both terms, three hours.* Professor HENDERSON.

Civil Engineering

9-10. Road and Railroad Surveying and Engineering. Open to Seniors. *Both terms, three hours.* Professor STACY.

15-16. Mechanics of Engineering. Prerequisite, Mathematics 3-4. Open to Juniors and Seniors. *Both terms, three hours.* Professor STACY.

19-20. Hydraulics and Sanitary Engineering. Open to Seniors. *Both terms, three hours.* Professor STACY.

21-22. Retaining Walls and Dams; Arches. Senior elective; prerequisite, Mathematics 11-12. *Both terms, two hours.* Professor CAIN.

23-24. Theory of Structures. Prerequisite, Mathematics 15-16. Open to Seniors. *Both terms, four hours.* Associate Professor HICKERSON.

25-26. Design of Bridges. To be taken in connection with Mathematics 23-24. *Both terms, three hours.* Associate Professor HICKERSON.

DEPARTMENT OF PHILOSOPHY

Psychology

3-4. Genetic Psychology. This course attempts to trace in broad outline the development of behavior in the race and the individual. Typical experimental methods of attack on problems of animal behavior and their results will be briefly treated, with particular reference to their bearing on behavior in man. Men-

tal development in the individual will be discussed, and various abnormal phenomena will be considered in their bearing on normal human behavior. Lectures, assigned readings, thesis. Open to Juniors and Seniors. Prerequisite, Philosophy 1-2 or Education 41-42. *Both terms, two hours.* Professor CHASE.

Philosophy

17-18. Epistemology: a study of the Critical Philosophy; lectures, theses. First term: Prolegomena and Practical Reason and the work that prepared the way for Kant. Second term: *Kritik der reinen Vernunft*. *Both terms, three hours.* Professor WILLIAMS.

19-20. A Companion Course to Philosophy 15-16. The aim of the course is to sketch the forces masterful in modern life. Open to Juniors and Seniors. *Both terms, three hours.* Professor WILLIAMS.

DEPARTMENT OF PHYSICS

5-6. Heat and Thermodynamics. Prerequisite, Physics 1-2 and Mathematics 3-4. Open to Juniors and Seniors. *Both terms, two hours.* Professor PATTERSON.

7-8. Modern Electrical Theory: the electron theory, electrolysis, conduction of electricity through gases, electric nature of matter, radioactivity. Prerequisite, Physics 1-2. Open to Juniors and Seniors. *Both terms, two hours.* Professor PATTERSON.

DEPARTMENT OF ROMANCE LANGUAGES

5-6. French Literature: a general outline of its various periods. Lectures, reading, reports. Prerequisite, French 3-4. Open to Juniors and Seniors. *Both terms, three hours.* Associate Professor TOWLES.

11-12. French Literature in the Seventeenth Century. Lectures, reading, reports. Prerequisite, French 5-6. Open to Juniors and Seniors. *Both terms, three hours.* Associate Professor TOWLES.

This course alternates with course 13-14; to be given in 1915-1916.

13-14. French Literature in the Eighteenth Century. Lec-

tures, reading, reports. Prerequisite, French 5-6. Open to Juniors and Seniors. *Both terms, three hours.* Professor DEY.

This course alternates with course 11-12; to be omitted in 1915-1916.

15-16. French Literature in the Nineteenth Century. Lectures, reading, reports. Prerequisite, French 5-6. Open to Juniors and Seniors. *Both terms, three hours.* Professor DEY.

17-18. The French Drama. A study of the development of the drama in France. Lectures, reading, and much collateral reading with reports. Open to those who have taken, or who take at the same time, French 5-6; also open to Juniors and Seniors. *Both terms, two hours.* Professor DEY.

23-24. Old French. Reading of the oldest texts: La Chanson de Roland; Aucassin et Nicolette; Chrétien de Troyes. Lectures on French Phonology and Morphology. Prerequisite, French 3-4, a knowledge of Latin equivalent to courses 1-2 and 3-4 of the Latin Department, and a reading knowledge of German. *Both terms, two hours.* Associate Professor TOWLES.

25-26. Provençal: a study of the ancient language and literature of Provence. Prerequisite, French 23-24. *Both terms, two hours.* Professor DEY.

DEPARTMENT OF ZOOLOGY

[For description of Biological Laboratories, see page 249.]

3-4. Comparative Anatomy and Embryology of the Vertebrates; dissection of types, especially amphioxus, petromyzon, fish, fowl, mammal; early stages in embryology of ascaris, starfish; segmentation and formation of germ layers in teleost and frog; germ layers and development of characteristic vertebrate organs in chick; selected stages in development of mammal (rabbit, pig); fundamentals of microscopic technique; laboratory work with occasional lectures. Open to Juniors and Seniors. *Both terms, three hours.* Professor WILSON and Mr. GEORGE.

7-8. General Zoology: an advanced course for such as expect to teach or to carry on investigations in zoological, or allied medical, subjects. Laboratory work to cover anatomy, with histology and embryology, of chief orders of animals, especially invertebrates; collecting trips; identification of forms; essen-

tials of gross and microscopic photography: microscopic technique supplementary to that of the usual courses in embryology and histology. Conferences and lectures dealing with morphology of groups, history of zoology, and with the theory of biology as deduced from facts of comparative and experimental study. Open to Juniors and Seniors. *Both terms, five hours.* Professor WILSON.

9-10. Animal Morphology: detailed study of problems in microscopic anatomy and embryology, chiefly comparative, in part experimental; laboratory work with use of classical textbooks and original memoirs; theses. *Both terms, five hours or more.* Professor WILSON.

PART THREE

PECUNIARY AID AND EXPENSES

MEDALS AND PRIZES

REGULATIONS

PECUNIARY AID AND EXPENSES

FELLOWSHIPS AND SCHOLARSHIPS

THE LEDOUX FELLOWSHIP IN CHEMISTRY. (Established in 1911 by Dr. Albert R. LeDoux.) The holder is expected to devote himself to research in chemistry. This fellowship is endowed and yields \$300 annually.

A FELLOWSHIP IN TECHNICAL CHEMISTRY, established in 1911, is offered to graduate students for research in technical chemistry. This fellowship yields \$200 annually.

A FELLOWSHIP IN ORGANIC CHEMISTRY is offered to graduate students for research in Organic Chemistry. This fellowship yields \$300 annually.

THE LIBRARY FELLOWSHIPS, two in number, established in 1907, yields each \$150 annually. The holders are expected to assist in the Library.

THREE TEACHING FELLOWSHIPS, established in 1907, yield each \$200 annually. The holders are expected to assist in the work of instruction in the departments to which the fellowships are assigned.

THE CAMERON SCHOLARSHIPS. (Established in 1892.) The heirs of Paul Carrington Cameron founded, in his memory, ten scholarships of the value of sixty dollars each.

THE DIALECTIC AND PHILANTHROPIC LITERARY SOCIETIES' SCHOLARSHIPS. (Established in 1893.) The Dialectic and Philanthropic Literary Societies of the University founded two scholarships of the value of sixty dollars each, recipients of which shall give assistance in the Library.

THE MOORE SCHOLARSHIPS. (Established in 1881.) Bartholomew Figures Moore, of Raleigh, bequeathed five thousand dollars, the interest of which shall be devoted to paying the tuition of students.

THE MARY ANN SMITH SCHOLARSHIPS. (Established in 1891.) Miss Mary Ann Smith bequeathed thirty-seven thousand dollars for the foundation of scholarships, the number of scholarships to be determined by the amount of the income.

THE MARY RUFFIN SMITH SCHOLARSHIPS. (Established in 1885.) Miss Mary Ruffin Smith bequeathed to the University, in memory of her brother, Dr. Francis Jones Smith, a valuable tract of land in Chatham county of fourteen hundred and sixty acres, known as Jones's Grove. The will provides that rents of the land, or the interest on the purchase money, if sold, shall be used to pay the tuition of such poor students as the Faculty shall appoint.

THE SPEIGHT SCHOLARSHIPS. (Established in 1892.) The late Mrs. Mary Shepard Speight bequeathed ten thousand dollars to the University. The income shall be used to pay the tuition of needy students; but if tuition is ever made free, the income shall be used toward paying the salaries of the professors.

THE WOOD SCHOLARSHIP. (Established in 1892.) Mrs. Mary Sprunt Wood, of Wilmington, has founded, in memory of her late husband, Dr. Thomas Fanning Wood, a scholarship of the value of sixty dollars.

THE WEIL SCHOLARSHIP. (Established in 1898.) A fund established by Mr. Henry Weil, of Goldsboro, furnishes one scholarship of the value of sixty dollars.

THE ARMFIELD SCHOLARSHIPS. (Established in 1901 and 1904.) These scholarships are founded by the generosity of Mr. Eugene M. Armfield, of the class of 1888, High Point, N. C.

THE ALUMNI SCHOLARSHIPS. These scholarships have been established by the gifts of Alumni. A scholarship will be awarded for each one thousand dollars given.

THE KENNETH MURCHISON SCHOLARSHIPS. (Established in 1904.) These scholarships have been founded by Mrs. Shirley Carter, of Baltimore, Md., and Mrs. James Sprunt, of Wilmington, N. C., in memory of their father. They are awarded by the founders.

None of these scholarships is open to students in the professional Schools of Law, Medicine, and Pharmacy.

All applications for scholarships must be filed in the President's office on or before August 15, and must be in the regular form prescribed by the University. Blank forms are supplied on application to the President.

FREE TUITION

By an act of the Legislature in 1887, free tuition is given to candidates for the ministry, to the sons of ministers, to young men under bodily infirmity, to teachers, and to young men preparing to teach. In order to secure this free tuition, young men preparing to teach must agree to teach in North Carolina for at least two years after leaving the University. This enables the University to aid effectively the public school teachers of the State.

LOAN FUNDS

THE DEEMS FUND. (Established in 1879.) A fund of six hundred dollars was established by Rev. Charles Force Deems, D. D., late pastor of the Church of the Strangers, New York City, formerly a professor in the University, in memory of his son, Lieutenant Theodore Disosway Deems. In 1881 the gift was greatly enlarged through the munificence of Mr. William H. Vanderbilt, by a gift of ten thousand dollars, "as an addition to the Deems fund, to be loaned to indigent students of the University."

THE MARTIN FUND. This fund has been established by the bequest of Mr. Thomas D. Martin, of Raleigh. Only the interest of the fund can be used for loans. It became available during the session of 1907-1908.

All applications for loans must be filed in the President's office on or before August 15.

Applications for loans will not be considered unless accompanied by testimony from responsible persons as to poverty and merit. The funds are limited in amount and are loaned only on the security of two approved signatures and at the legal rate of interest.

EXPENSES

Every effort is made to reduce to the lowest point the necessary expenses of an education at the University. The charges for each of the two terms are as follows:

Tuition fee	\$30.00
Fee for Matriculation*	15.00
Total	\$45.00

Students taking courses in the laboratories are charged a small fee for materials. Every student must keep on deposit with the Treasurer two dollars as security for damages. Willful damage to University property is charged to the perpetrator, if known; otherwise it is charged to the general deposit for damages. Any balance is returned to the student at the end of the year.

Excellent board is furnished at Swain Hall for twelve and a half dollars a month. A few students can earn their board by waiting on the tables. The entire annual expenses need not exceed three hundred dollars, and they may be reduced to two hundred dollars.

It is confidently believed that no institution offers wider opportunities for self help to meritorious students of slender means. The desire is that no worthy boy, however poor, shall ever be turned away for lack of means. To such the University and town offer unusual opportunities for support. Many students are now working their way through college by every form of honorable labor. A number are here as a result of money earned or borrowed. Seventy are aided by loans, and about five hundred have received aid from the University in loans and scholarships in the past twenty years. A few students are selected by the authorities as waiters at Swain Hall. Otherwise all opportunities available in the University and town must be secured by the personal efforts of the individual, or with the assistance of the Faculty Committee on Self-Help. They are not assigned by the President.

* This fee includes also the gymnasium fee, the library fee, the fee for the attendance of the University physician and of the University nurse, and the fee for athletics.

DORMITORY ACCOMMODATIONS

The University buildings contain rooms available for the accommodation of something over three hundred students. There is no charge for service in addition to the rent. All rooms are fitted with electric lights. Room rent ranges from seventy-five cents to \$6.00 a month for each occupant, the price depending upon the location of the room. Battle, Vance, Pettigrew, Smith, Carr, Old East, the Inn dormitories contain furnished rooms.

All the buildings of the University are heated by hot water according to the most improved methods. In the dormitories the charge for light and heat will be \$2.00 a month for each room.

MEDALS AND PRIZES

THE COLONIAL DAMES PRIZE. (Established in 1908.) The North Carolina Society of Colonial Dames offers annually a first prize of fifty dollars and a second prize of twenty-five dollars for the best essays on some subject connected with the Colonial Period of North Carolina.

THE LITERARY ESSAY MEDAL. (Established in 1890.) A gold medal is offered annually by Professor Thomas Hume to that member of the Senior Class who shall present the best essay or thesis on some distinctly literary subject.

THE MANGUM MEDAL IN ORATORY. (Established in 1878.) A gold medal founded by the Misses Mangum, late of Orange county, in memory of their father, Willie Person Mangum, is continued by his granddaughters, Mrs. Julian A. Turner, Mrs. Stephen B. Weeks, and Miss Preston Leach, and awarded to that member of the Senior Class who shall deliver the best oration at Commencement.

THE BINGHAM PRIZE IN DEBATE. (Established in 1899.) This prize is offered by Mr. R. W. Bingham in memory of his great-grandfather, grandfather, father, and brother. It is given annually for excellence in debate. The contestants are representatives of the Literary Societies, and the contest is held on Tuesday evening of Commencement week.

THE KERR PRIZE IN GEOLOGY AND MINERALOGY. (Established in 1889.) A prize of fifty dollars is offered annually by Mr. William H. Kerr in memory of his father, Professor Washington Caruthers Kerr, to any undergraduate or graduate student, for the best thesis containing original work in the geology or mineralogy of North Carolina.

THE EBEN ALEXANDER PRIZE IN GREEK. (Established in 1887.) A prize of ten dollars is offered annually to that member of the Sophomore Class who shall present the best rendering into English of selected passages of Greek not previously read.

THE WORTH PRIZE IN PHILOSOPHY. (Established in 1883.) Mr. Charles Williams Worth, in memory of his father, David Easton Worth, of the class of 1853, will print the best thesis submitted by a student in Philosophy 4.

THE EARLY ENGLISH TEXT SOCIETY PRIZE. (Established in 1886.) A special prize is offered annually by the Early English Text Society, of London, for advanced work in Anglo-Saxon and Middle English.

THE BRYAN PRIZE. (Established in 1903.) A prize will be given annually by Mr. William Jennings Bryan for the best thesis in Political Science.

THE HUNTER LEE HARRIS MEMORIAL. (Established in 1903.) Dr. Charles Wyche, of St. Louis, offers annually, in memory of Hunter Lee Harris, of the class of 1893, a gold medal for the best original story by any student in the University.

THE THOMAS HUME PRIZE. (Established in 1904.) A prize of fifty dollars is offered annually by Mr. W. G. Peckham, of New York, for the best work in the Old English Ballads and Shakespere or Milton.

THE WILLIAM CAIN PRIZE IN MATHEMATICS. (Established in 1908.) A gold medal is offered annually by Professor William Cain to that student who shall take the highest rank in Mathematics 11-12. No student will be recommended for the prize unless he attain to grade 2.

THE PRESTON CUP, given by the Hon. E. R. Preston, in memory of his brother, Ben Smith Preston, will be awarded annually to the undergraduate student who during the months September to April has done the best work of a journalistic nature.

Certain prizes are offered also in the Professional Schools of Law, Medicine, and Pharmacy. For these, see under the several schools.

REGULATIONS

REGISTRATION

All students are expected to present themselves for registration on *Monday, Tuesday, or Wednesday, September 6, 7, or 8, 1915*, and *Monday or Tuesday, January 3 or 4, 1916*, between the hours of 9 A. M. and 4 P. M., at the office of the Registrar.

ARRANGEMENT OF COURSES

Every student, when he presents himself for registration, must submit a list of courses, required and elective, which he desires to pursue.

No student will be allowed to take less than 15 hours nor more than 18 hours of class-room work a week without special permission of the Faculty or of the President.

Students desiring to change their courses must make written application to the Committee on Courses for the desired change. The application will be considered by the committee and the instructors in the departments concerned and will be granted only after a careful consideration of the facts in each case. No changes will be permitted after the first Tuesday following the registration days except such as are granted after application to, and approval by, the Faculty.

Candidates for more than one degree shall not offer the same elective in two courses nor a required study in one course as an elective in another.

ASSIGNMENT OF ROOMS

The University buildings contain one hundred and sixty-five furnished double rooms, eight single furnished rooms, and eighty-two double unfurnished rooms available for the accommodation of students. These rooms are assigned to students by the Treasurer, at the beginning of each term, in the order of application.

The President reserves the right to require any student whom for any reason he considers an undesirable tenant to vacate a room in the University buildings.

All occupants are required to sign a contract subject to the following special rules:

In order to retain his room for the next session, a student must file with the Treasurer before May 20th a room contract properly signed. Double rooms must be signed for by both intending occupants. The rooms thus signed for will be retained until August 31st provided a deposit of \$5 be paid by each intending occupant before August 15th. The \$5 deposit will be forfeited in case the signer or signers do not themselves occupy the room and pay the full rent. Rooms not signed for or forfeited by failure to pay at the proper date will be assigned in the order of application. No dogs shall be kept in the University dormitories. Breach of this regulation leads to forfeiture of the room.

The right to occupy a room is not transferrable and terminates with the expiration of the lease. Any attempt on the part of an occupant of a room to sell or transfer his right to occupancy shall be deemed a fraudulent transaction. The penalty of violating this rule shall be the forfeiture of the room by the new lessee.

The occupant of a room will be held directly responsible for any damage done to the furniture supplied in his room by the University.

CONDUCT

By order of the Board of Trustees the Faculty is directed to dismiss from the University any student who is known to engage in drinking intoxicating liquors, gambling, hazing in any form, (presence at hazing is regarded as participation), or to be guilty of dissolute conduct.

Students persistently neglectful of duty, or addicted to boisterous conduct or rowdyism, may be requested to leave the University.

ATTENDANCE

Regular attendance upon lectures and recitations is required of all students.

In any term, absences are counted from the first regular meeting of each class. In no case will a student be considered present at any class until he has been registered as a member of that class. No student will be allowed more than five unexcused absences during a month. When this number is exceeded he will be placed on probation, and notified that any further unexcused absences

on his part during the next month may necessitate his withdrawal from college. This notice will be sent to his parents or guardian also.

Any student whose absences from a class during any month equal the number of scheduled meetings of the class for one week is required to stand a special examination on that month's work within the first two weeks of the succeeding month at an hour to be announced by the instructor. In the case of those whose absences in a given month reach the number indicated above, and who fail to stand the examination provided for such absences, it is left to the discretion of the instructor to retain them in his class.

Students who are absent from a class during the month of December, January, or May as much as 25 per cent of the scheduled meetings of the class must stand an examination for these months before being entitled to any grade on the term examination. This special examination is to be held in connection with the regular term examinations, or at some time during the examination period.

Students who are absent during any term as much as $33\frac{1}{3}$ per cent of the scheduled meetings of the class, except in case of prolonged sickness necessitating at least half the absences, may at the discretion of the instructor be debarred from the term examination.

Attendance at Chapel is compulsory for all students in the University except for members of the professional departments and for such others as are specially excused. Absence from Chapel will subject the student to discipline by the Executive.

No student is allowed to absent himself from the University without written permission from the President or his representative. This permission may, at the discretion of the executive officer, be granted only upon the formal request of the parent or guardian.

EXAMINATIONS

Regular examinations on all subjects are held at the close of each term. Excuses from examinations are granted only in case of absolute necessity. Such an excuse, to be valid, must be obtained from the President by the day of examination, and communicated officially to the instructor holding the examination.

Freshmen, Sophomores, and Juniors who have been excused from an examination or have received the grade 5 (see page

144) in any subject will be given one, and only one, opportunity to make good the deficiency by special examination. Examinations on the Fall term of a subject may be made good either in the following September, according to the schedule given below, or at the regular examinations of the next lower class in January. Examinations on the Spring term of a subject may be made good either in the following September, according to the schedule given below, or at the regular examinations of the next lower class in May. In case a student fails in the special examination, he must repeat the subject with the class of the succeeding year. If the unremoved condition be in an elective subject not offered for the succeeding year, the student must take another elective valued at the same number of hours.

Seniors who have been excused from an examination or have received the grade 5 in any subject at either the Fall or Spring examination will be given but one opportunity to make good the deficiency by special examination, viz., during the regular examination period of the three lower classes in May.

Papers handed in at special examinations by students who have been officially excused from the regular examination will be graded. All others will be marked either "passed" or "failed." Students who hand in papers at regular examinations are considered to have relinquished any claim to grades on special examinations.

Students who absent themselves from regular examinations without having obtained an official excuse, and those who are present at the regular examinations but do not hand in papers, are given the grade 6 (see page 144). They are required to repeat the subject with the next lower class, or, in case of an elective not offered in the succeeding year, to take another elective valued at the same number of hours.

A student wishing a special examination in any subject must deposit an application in the office of the Registrar at least one week before the beginning of the period of examinations.

Each student is required to subscribe his name to the following pledge on every paper: "*I hereby certify that during this examination I have neither given nor received aid.*" No paper without the pledge will be read.

The order of examinations for the removal of conditions in September, 1915, will be as follows:

Wednesday, September 1

10 A. M.	Latin	2:30 P. M.	Geology
	Philosophy		Education

Thursday, September 2

10 A. M.	Physics	2:30 P. M.	Chemistry
	Greek		History
			Economics

Friday, September 3

10 A. M.	English	2:30 P. M.	Zoology
			Botany

Saturday, September 4

10 A. M.	German	2:30 P. M.	Mathematics
	French		

STANDING

Semi-annual reports of the standing of all students in all the studies of the previous term are sent to parents or guardians. The reports are based upon the following system of marking:

Grade 1,	95-100	per cent.
Grade 2,	90-95	per cent.
Grade 3,	80-90	per cent.
Grade 4,	70-80	per cent.
Grade 5,	60-70	per cent.
Grade 6,	below 60	per cent.

Students must attain a grade of 4 to pass in any study. Grade 5 indicates that the student is conditioned, but may remove the deficiency by special examination, as explained on page 143. Students receiving grade 6 in any study must take such study again with the next lower class, or in case of an elective not offered in the succeeding years, must take another elective valued at the same number of hours.

A student who has failed on all the examinations of the year in any college study may not take a higher class in that department, until he makes good his deficiency.

A student to be ranked as a Sophomore must have passed twelve hours of work; to be ranked as a Junior, twenty-four hours; to be ranked as a Senior, forty-two hours.

No Freshman who fails to pass at least six hours, and no Sophomore or Junior who fails to pass nine hours shall be readmitted to the College the following year except by a special vote of the Faculty or a delegated committee of the Faculty.

In addition to the semi-annual reports, there are sent out during the session four monthly reports in which the standing of students is indicated in a general way.

CERTIFICATES

A certificate is granted to a student who has completed with credit, in any department except those of Mathematics, Chemistry, Physics, and Geology, all work required for a degree together with elective work in the same department. (For detailed statement of requirements, see under the several departments of instruction.)

GRADUATION

Each Senior will be officially informed by the Registrar in August of all deficiencies standing against him.

The number of orations in the contest for the Mangum Medal is limited to four. The candidates must be members of the College or the School of Applied Science, and must announce their subjects to their respective Deans by February 1. The orations shall be delivered in private before a committee of the Faculty on May 1, who shall decide upon the relative merits of the orations. The four successful candidates are known as the Commencement Orators of the Senior Class.

ATHLETIC AND OTHER ORGANIZATIONS

No students will be allowed to take part in athletic contests, concerts, debates, etc., entailing absence from the University, whose parent or guardian objects to such participation.

A student who was in attendance upon the University during a previous term or session must have passed satisfactory examinations upon at least eight hours of work before he will be allowed to represent the University in any athletic contest or in any other public capacity.

No student reported as deficient in a majority of his classes may participate in any athletic contest or otherwise publicly represent the University, until the deficiency is made good.

No team or club will be allowed to be absent from the University for more than ten lecture days during the term.

The manager of each athletic team or musical club shall submit to the Athletic Committee or to the President a schedule of all engagements before positive arrangements are made.

The faculty regulations governing athletics are as follows :

1. No student whose parents or guardian object to his participation in athletic contests shall be allowed to take part in such contests.

2. No student shall play upon the University athletic teams except after physical examination by the Director of the Gymnasium (or by a responsible expert officer of the University acting in his stead and by his request) and with the approbation of the Director.

3. A student who was in attendance upon the University during a previous term or session must have passed satisfactory examinations upon at least eight hours of work before he will be allowed to represent the University in any athletic contest.

4. Inasmuch as a member of an athletic team of this University is a representative student and enjoys special honor in thus representing the University, this privilege shall be withheld from any student whose scholastic standing is discreditable. A preliminary report of the scholastic standing of the members of the football team shall be called for on October 15th, and of the baseball team on March 15th, and the players notified of their deficiencies. Another report shall be called for on November 15th for the football team and on April 15th for the baseball team, at which time any player deficient in a majority of his studies shall be debarred from representing the University during the remainder of the term.

5. The members of any athletic team may be allowed not more than ten lecture days leave of absence from the University for the purpose of engaging in athletic contests ; but no student who is a member of more than one athletic team shall be allowed more than twenty lecture days leave of absence during the entire session for such purpose.

6. The manager of each athletic team shall submit to the Faculty Committee on Athletics or to the President a schedule of all engagements before positive arrangements are made.

7. Before any student can become a member or a substitute member of any athletic team in the University and take part in any intercollegiate contests he must make application to the Faculty Committee on Athletics in the University and secure the endorsed approval of that Committee to his application. It shall be the duty of the Faculty Committee on Athletics to have the Executive officers of the University endorse such application to the effect that the applicant is a registered student of the University.

8. It shall be the duty of the Faculty Committee on Athletics to inquire into and make a record of the athletic experiences of the applicant, and it shall be the duty of the applicant to appear before the Committee and answer on his honor such questions as the Committee may see fit to ask.

9. It shall be the duty of the Faculty Committee on Athletics to require a pledge in writing of the applicant, certifying on his honor that he has never accepted, directly or indirectly, remuneration, compensatory gift, valuable consideration, or promise thereof, for his athletic services, and that he is in the proper and strict sense of the word an amateur player in collegiate athletic sports, before the Committee endorses his application.

10. It shall be the duty of the Graduate Manager, the Head Coach, the President and the Treasurer of the Athletic Association, the members of the Athletic Council, the Director of the Gymnasium, and the Manager and the Captain of the team concerned to furnish the Faculty Committee on Athletics, on request, a statement to the effect that each member of an athletic team is above their suspicion as to his eligibility to represent the University as an amateur player before such player shall be allowed to take part in any contest.

11. No student who has been a member of, or substitute* member of, the football or baseball team of another college† or University during the preceding college year‡ shall be permitted to become a member of either team of this University during his first session, with the following exception: Such student shall be

* The term "substitute" is interpreted to mean a student who has taken part in two or more intercollegiate contests.

† The term "college" is hereby interpreted to mean any college named in Table 28 of the Report of the U. S. Commissioner of Education of 1902, which has not fewer than 150 male students of collegiate grade recorded in the catalogue of the institution in question as students of the college year preceding the applicant's entrance into the University.

‡ The college year consists of one session divided into two terms.

eligible for these teams at this University if he shall have registered in this University not later than within one week after the opening of the preceding spring term, and shall have been a student here during the said term.

12. No person whose name appears in the catalogue list of officers of instruction and administration of the University, and who receives remuneration therefrom, shall be a member of any athletic team representing the University.

13. The maximum period of eligibility for baseball and football shall be four years. In estimating the period of eligibility the years of baseball and football shall both be taken into account ; but in no case shall a player be charged with four years' athletic work, unless at least four calendar years have elapsed from the time he entered upon his first intercollegiate contest, omitting from the calculation any sessional intermission by non-attendance. In case the player does not participate in either baseball or football during a college session, such session shall not be counted, but if such player does play on either the baseball or football team during any intermediate session, this shall count as if the player had played on both teams during such session.

14. No student of this University shall be eligible for any athletic team who shall have played upon, or been a member or substitute member of any of the professional or league teams named in Classes A, B, C, and D, in the publication of the American Sports Company. To the list of professional teams thus prescribed shall be added all league teams in any state or states, which the leading university of such state or states declares professional and from which it debarb its own players.

15. The Faculty Committee on Athletics is directed to assume responsible charge of the details of the athletic situation and to permit the playing of intercollegiate games with such colleges only as express a general conformity with the code of rules adopted by this faculty. The term "general conformity" is interpreted to mean conformity in regard to period of residence, maximum period of eligibility, and amateur standing.

FRATERNITIES

Undergraduate students may join fraternities after registration in their Sophomore year. Fraternity men are not allowed to pledge Freshmen to join fraternities.

PART FOUR

THE SCHOOL OF LAW

THE SCHOOL OF MEDICINE

THE SCHOOL OF PHARMACY

THE SUMMER SCHOOL FOR TEACHERS

THE BUREAU OF EXTENSION

THE SCHOOL OF LAW

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., PRESIDENT.

LUCIUS POLK MCGEHEE, A. B., DEAN.

LUCIUS POLK MCGEHEE, A. B., *Professor of Law.*

PATRICK HENRY WINSTON, *Professor of Law.*

ATWELL CAMPBELL MCINTOSH, A. M., *Professor of Law.*

The law school which developed into the Law School of the University was founded in 1843 at Chapel Hill as a private school by William H. Battle, then a judge of the Superior Court, later a Justice of the Supreme Court of the State. In 1845 Judge Battle was made Professor of Law in the University and it was provided that the degree of Bachelor of Laws should be conferred on those completing the prescribed two year course. From the records of the University, however, it seems that few degrees were actually conferred. For a long time the school maintained a certain independence of the University. The Professor of Law received no salary though he enjoyed the fees from his classes, and the students were not entirely subject to the discipline of the University.

In 1899 the school was completely incorporated into the University with the late Judge James C. MacRae, previously a Justice of the Supreme Court of North Carolina, as the first Dean of the Law School.

REQUIREMENTS FOR ADMISSION

For admission to the regular work of the school, students, unless they are "special students" as explained below, must have completed fourteen units of work. This amount of work is about equivalent to four years training in a high school. It is the same as the requirement for entrance to the Freshman class in the academic department of the University, and will be found explained on page 32-38 of the General Catalogue.

Students over twenty years of age who are not able to qualify as regular students may be admitted as "special students" upon presenting satisfactory evidence that they have received such training as will enable them to make profitable use of the opportunities offered in the school.

Seniors in the College will be admitted to take as electives courses selected, with the approval of the Dean, from the work of the law school.

The days for the registration of law students are the same as for the registration of students for the College. See the General Catalogue, page 140, or the University calendar.

Students who enter the School of Law for the Spring term without having matriculated for the fall term, should present themselves for matriculation at the end of the mid-year examinations, as shown in the University Calendar in this Catalogue. Students, however, are advised to enter at the Fall term, if it is possible.

DEGREE OF LL. B.

The degree of Bachelor of Laws (LL. B.) will be conferred upon students who have satisfactorily completed the entire courses prescribed for the Junior and Senior classes of the Law School, and who satisfy the following conditions:

(a) Candidates must have completed academic courses equivalent to the work of the Freshman and Sophomore classes in the University.

(b) Candidates must present satisfactory theses on legal subjects approved by the Dean.

(c) Candidates must have spent at least one year in residence at the University as students in the School of Law.

In the discretion of the Law Faculty, credit may be given to candidates for courses completed in other Schools of Law of recognized standing.

Plans have been considered for enlarging and lengthening the curriculum, and the Law Faculty has been authorized to formulate a three years' course of study for candidates for the degree of Bachelor of Laws. It is not considered wise to make this change at present, and it will be duly announced in the Catalogue.

DEGREES OF A. B. AND LL. B.

The University offers also the combined degrees of A. B. and LL. B. for the successful completion of the following requirements:

1. The courses in the College outlined below.
2. All academic work to be completed by the end of the last regular examination period of the Junior Year of the candidate.
3. The completion of all the courses in the School of Law prescribed for the LL. B. degree.
4. The presentation of a satisfactory thesis on a legal subject approved by the Dean of the School of Law.

Prescribed academic work:

	FIRST YEAR		SECOND YEAR		THIRD YEAR
	Eng. 1-2 (3)		Eng. 3-4 (3)		
	Eng. 11-12 (1)		Lat. 3-4 (3)		Econ. 1-2 (3)
	Math. 1-2 (4)		Hist. 3-4 (3)		Philos. 1-2 (3)
	Lat. 1-2 (4)		{ Greek 3-4 (3)		Eng. (3)
Select	{ Greek 1-2 (4)	one	{ French 3-4 (3)		Hist. (3)
one	{ French 1-2 (3)		{ Ger. 21-22 (3)		Elective (3)
	{ Ger. 1-2 (3)	Select	{ Math. 3-4 (3)		
	Hist. 1-2 (3)	one	{ Phys. 1-2 (3)		
			{ Chem. 1-2 (3)		

CERTIFICATES

Any student who has been in regular attendance in the School of Law and who has satisfactorily completed one or more courses is entitled to a certificate of attendance and standing.

NUMBER OF HOURS OF WORK REQUIRED OR PERMITTED

No student will be permitted to take more than eighteen hours of work weekly except with the special permission of the Faculty.

No student, unless he is also taking other courses in the University, will be permitted to take less than ten hours of work weekly, nor will a student taking less than ten hours weekly be considered as studying law within the rule of the Supreme Court requiring two years' study of law as a necessary preliminary of applicants for license to practice in North Carolina.

COURSES OF INSTRUCTION

The courses offered and the general order in which they are taken up are indicated in the following programme of studies which is arranged to cover two years, known as the Junior Year and the Senior Year. The method of instruction varies in the different courses. In some text-books and lectures with collateral

reading of cases form the basis of work. In others the subject is developed directly from the study of selections of decided cases, and quizzes thereon.

Junior Year

FALL TERM

ELEMENTARY LAW: a general outline of the field of legal studies; Clark's *Elementary Law*. *Two hours a week*. Professor WINSTON.

CONTRACTS: the general principles of contract; Benjamin and Messing's *Cases on Contracts*; lectures. *Four hours a week*. Professor MCINTOSH.

PERSONS: Domestic relations, including husband and wife with marriage and divorce, parent and child, guardian and ward, infancy, insanity, drunkenness, and aliens; textbook to be announced later. *Two hours a week*. Professor MCGEEHEE.

BAILMENTS: bailments, carriers, telegraphs, and telephones; Goddard's *Cases on Bailments and Carriers*. *Two hours a week*. Professor WINSTON.

AGENCY: Mechem's *Cases on Agency*. *Two hours a week*. Professor MCGEEHEE.

PROPERTY: a rapid outline of Personal Property, after which the study of Real Property is begun; lectures; Kirchwey's *Readings in Real Property*; Finch's *Cases on the Law of Property in Land*. *Three hours a week*. Professor MCGEEHEE.

SPRING TERM

CRIMINAL LAW: Derby's *Cases on Criminal Law*, with statutes and selected cases. *Two hours a week*. Professor WINSTON.

TORTS: Burdick's *Cases on Torts*. *Three hours a week*. Professor WINSTON.

SALES: Erwin's *Cases on Sales*. *Two hours a week*. Professor MCGEEHEE.

NEGOTIABLE INSTRUMENTS: Huffcut's *Cases on Negotiable Instruments*, and *The Negotiable Instrument Law*. *Two hours a week*. Professor MCINTOSH.

QUASI-CONTRACTS: lectures and selected cases. *One hour a week.* Professor McGEHEE.

PROPERTY: a continuation of the course begun in the preceding term; same textbooks: *Three hours a week.* Professor McGEHEE.

PLEADING AND PRACTICE: a study of remedies and pleading, which continues throughout the remainder of the student's course, is begun. This term is devoted to common law remedies and common law pleading. Sunderland's *Cases in Common Law Pleading*. *Two hours a week.* Professor McGEHEE.

Senior Year

FALL TERM

CONSTITUTIONAL LAW: McClain's *Cases on Constitutional Law* and selected cases; lectures. *Four hours a week.* Professor McGEHEE.

EQUITY: Bispham's *Principles of Equity*. *Three hours a week.* Professor WINSTON.

EVIDENCE: Hughes on *Evidence*, selected cases. *Three hours a week.* Professor McINTOSH.

INSURANCE: Richard's *Cases on Insurance*. *Two hours a week.* Professor WINSTON.

FEDERAL COURTS: The United States Courts Cases; the study of the law and procedure in selected topics; Hughes on *Federal Jurisdiction*. *One hour a week.* Professor McINTOSH.

PLEADING AND PRACTICE: pleading under the American code system. *North Carolina Code of Civil Procedure*; lectures. One meeting of the class each week is devoted to the preparation of actual pleadings and other practice forms. *Three hours a week.* Professor McINTOSH.

SPRING TERM

PRIVATE CORPORATIONS: Textbook to be announced. *Three hours a week.* Professor McGEHEE.

*PUBLIC CORPORATIONS: Macy's *Cases on Municipal Corporations*. *Two hours a week*. Professor McINTOSH.

*BANKRUPTCY AND INSOLVENCY: Assignment for Benefit of Creditors, Creditor's Remedies, and the Federal Bankruptcy Act; lectures, selected cases. Students' Remington on *Bankruptcy*. *Two hours a week*. Professor McINTOSH.

PARTNERSHIP: Mechem's *Cases on Partnership*. *Two hours a week*. Professor WINSTON.

*SURETYSHIP: Bunker's *Cases on Suretyship*. *One hour a week*. Professor WINSTON.

Alternates with Conflict of Laws. To be given in 1915-16.

WILLS AND ADMINISTRATION: Costigan's *Cases on Wills and Administration*. *Two hours a week*. Professor WINSTON.

*CONFLICT OF LAWS: lectures and cases. *One hour a week*. Professor McINTOSH.

Alternates with Suretyship. To be omitted in 1915-16.

*ADMIRALTY: Hughes on *Admiralty*. *One hour a week*. Professor McINTOSH.

PRACTICE AND PROCEDURE: a continuation of the work of the first term with especial reference to equity pleading and extraordinary remedies. *Three hours a week*. Professor McINTOSH.

* From the subjects marked with an asterisk the student may omit a course or courses amounting to two hours of work weekly, devoting the time gained to the preparation of his thesis.

SCHEDULE OF LAW RECITATIONS
 Senior Studies in CAPS; Junior in small type

	8:30	9:45	10:40	11:35	12:30
Fall	PLEAD.	CONST. L.	FED. CTS.	Agency	EVIDENCE
MONDAY					
Spring	PLEAD.	PRIV. CORP.	Bills & Notes	Sales	BANKRUPTCY
Fall	Persons	EQUITY	Contracts	Property	CONST. LAW
TUESDAY					
Spring	Plead	PART'SHIP	Torts	Property	MUN. CORP.
Fall	Elem. Law	CONST. L.	Bailments	INSURANCE	Contracts
WEDNESDAY					
Spring	Crim. Law	PRIV. CORP.	Bills & Notes	WILLS	BANKRUPTCY
Fall	PLEAD.	EQUITY	Contracts	Property	EVIDENCE
THURSDAY					
Spring	LEAD.	SURETYS'P	Torts	Property	ADMIRALTY
Fall	Elem. Law	CONST. L.	Bailments	INSURANCE	Agency
FRIDAY					
Spring	Crim. Law	PRIV. CORP.	Quasi-Contr.	WILLS	Sales
Fall	Persons	EQUITY	Contracts	Property	EVIDENCE
SATURDAY					
Spring	Plead	PART'RSHIP	Torts	Property	MUN. CORP.

MOOT COURT

A Moot Court for practice in the preparation of pleadings, the argument of law points, and the actual conduct of trials is a feature of the school. It is conducted by the students with the assistance and co-operation of the Faculty. The court meets weekly, a member of the Faculty presiding.

ADDITIONAL OPPORTUNITIES OF UNIVERSITY LIFE

Students in the Law School will be admitted without additional expense to the course given in the Departments of Economics and of History in the College of Liberal Arts and to the courses in Public Speaking and English, subject to the rules stated as to

the number of hours which a student may take. A student taking such a course must satisfy the entrance requirements for the course selected.

Students of the School may become members of the Dialectic and Philanthropic Literary Societies, where they may take part in or witness debates of a high order and train themselves in parliamentary law. As students of the University they enjoy all the privileges of the University library, the University gymnasium, and the organizations of the University generally, literary, social, and athletic.

THE LAW LIBRARY

The law library is housed in the Law Building and contains about 5,000 volumes. The annual revenue of a fund raised by the former students and friends of the late Professor John Manning, LL. D., who presided over the School for many years, is devoted to the purchase of books for the library. Free access to the Library is allowed to the students of the School, though they are not permitted to take the books from the building.

PRIZES

THE HENRY R. BRYAN PRIZE: Mr. Shepard Bryan of the Atlanta Bar offers annually, in honor of his father, the Honorable Henry R. Bryan of Newbern, N. C., a set of Cooley's Insurance Briefs to that member of the Senior Law Class who shall submit the best thesis upon an approved legal subject.

CALLAGAN & COMPANY, LAW PUBLISHERS, CHICAGO, PRIZE: A copy of the Cyclopedic Law Dictionary is offered by the publishers to that member of the Senior Class who obtains the best general average in his work for the year.

CLARK PRIZES: The Chief Justice of the Supreme Court of North Carolina offers a prize to be awarded semi-annually to the student of the University Law School applying to the Court for license to practice law at the bar examinations in August and February, who is in the judgment of the Faculty best prepared to take the bar examination.

FEES AND EXPENSES

Tuition for Fall and Spring terms, each.....	\$35.00
Registration fees	15.00

There are no scholarships in the School. Good board is furnished at Swain Hall for \$12.50 a month. In the village board without rooms may be secured for from \$10 to \$16.50 a month.

The rent of rooms in the dormitories ranges from seventy-five cents to \$6.00 a month, for each occupant; and for each room a charge of one dollar a month is made for electric light and one dollar a month for heat.

ADMISSION TO THE BAR OR NORTH CAROLINA

Admission to the bar of North Carolina is under the direct control of the Supreme Court of the State. The rules of the Court as to the examination and licensing of applicants are given on page 160. Where circumstances and means permit, the reading should be done at a regular school of law. But the requirements of the rule may be satisfied by private reading. Students who have read law for a year privately or in a law office may, by attending the school for one year, beginning either in September or January, and by attending a term of the summer school, have an opportunity to study or review the course required by the Supreme Court of applicants for license.

To do this it will be necessary for such students to select, with the approval of the Faculty, subjects from the regular courses of both the Junior and Senior years. Such a course is not advised or approved except in cases where limited means render it a regrettable necessity. Two years spent in systematic study under competent instructors is a minimum period for mastering even the elements of so wide, complicated, and technical a subject as the law. The student should remember that he is preparing for his life-work, and only detriment to that life-work can in general result from a feverish anxiety to cut short the period of preparation and to abridge the studies which experience has marked out for the acquisition of the necessary qualifications.

THE SUMMER LAW SCHOOL

A session of the School of Law extending over a period of ten weeks is maintained during each summer, during which is provided a review of the course prescribed by the Supreme Court of North Carolina for applicants for license, and an opportunity for instruction for men who cannot become resident students during the scholastic year.

SESSION

The term for the summer of 1915 begins June 17 and ends August 27, three days prior to the examination before the Supreme Court for admission to the Bar of North Carolina.

LECTURES AND RECITATIONS

At this session two daily lectures and recitations of one hour and a half each will be held by professors of the Law Faculty and competent instructors. In addition there will be frequent quizzes. The two courses offered are intended to cover the requirements for reading prescribed, given below, in the rules of the Supreme Court of North Carolina. The instruction is conducted by means of text-books, lectures, leading cases, quizzes, and moot court.

An outline of the work and of the time assigned to the various subjects is approximately as follows:

Domestic Relation (6 lectures); Contracts (18 lectures); Torts (12 lectures); Corporations (6 lectures); Evidence (6 lectures); Pleading and the Code (12 lectures); Criminal Law (8 lectures); Personal Property (6 lectures); Real Property (20 lectures); Executors and Administrators (6 lectures); Equity (9 lectures); Constitutional Law (9 lectures); Legal Ethics (2 lectures).

The text-books used will be, as far as possible, those used at the regular session of the school, but any standard text-book on any of these subjects will be accepted.

EXAMINATIONS

No entrance examination is required; but each student must satisfy the faculty that he has sufficient general education to en-

able him to take the course with profit to himself. Examinations are required as each subject is completed, and at the end of the term certificates to that effect are issued to such students as have passed with credit all examinations in both courses. These certificates will not entitle the recipients to any credit in the work of the regular school.

FEES AND EXPENSES

Tuition for term	\$30.00
Registration and Incidental Fees	5.00

The above mentioned fees cover privileges of the University library, gymnasium, and baths. Board in the village, with room, will cost from \$10 to \$20 a month; without room, from \$10 to \$15.

For further information address the President of the University or the Dean of the School of Law, Chapel Hill, N. C.

RULES OF THE SUPREME COURT OF NORTH CAROLINA AS TO ADMISSION TO THE BAR

1. Applicants for license to practice law will be examined on the first Monday in February and the last Monday in August of each year, and at no other time. All examinations will be in writing.

2. Each applicant must have attained the age of twenty-one years or will arrive at that age before the time for the next examination, and must have studied: Ewell's Essentials, 3 vols.; Clark on Corporations; Schouler on Executors; Bispham's Equity; Clark's Code of Civil Procedure; Volume 1, Revisal (1905) of North Carolina; Constitution of North Carolina; Constitution of the United States; Creasy's English Constitution; Sharswood's Legal Ethics; Sheppard's Constitutional Text-book; Cooley's Principles of Constitutional Law. *Or their equivalents.*

Each applicant must have read law for two years at least, and file a certificate of good moral character, signed by two members of the bar who are practicing attorneys of this Court, and also a certificate of a Dean of a Law School, or of a member of the bar of this Court that the applicant has read law under his instruction or to his knowledge or satisfaction, for two years, and upon examination by said instructor has been found competent and proficient in said course. Such certificate, while indispensable, will, of course, not be conclusive evidence of proficiency. An applicant from another state can file a certificate of good moral character signed by any State officer of the state from which he comes. * * * *

3. Each applicant shall deposit with the clerk the sum of \$23.50 for the license and the clerk's fee before he shall be examined. * * * *

THE SCHOOL OF MEDICINE

FACULTY

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., PRESIDENT.

ISAAC HALL MANNING, M. D., DEAN.

CHARLES STAPLES MANGUM, A. B., M. D., *Professor of Anatomy.*

ISAAC HALL MANNING, M. D., *Professor of Physiology.*

WILLIAM DEBERNIERE MACNIDER, M. D., *Professor of Pharmacology.*

JAMES BELL BULLITT, A. M., M. D., *Professor of Histology and Pathology.*

ROBERT BAKER LAWSON, M. D., *Associate Professor of Anatomy.*

JOHN MELVILLE HUFF, *Assistant in Anatomy.*

HARRY LYNDON BROCKMANN, *Assistant in Histology.*

CLEVELAND FANE KIRKPATRICK, A. B., *Assistant in Bacteriology.*

HENRY VAN PETERS WILSON, Ph. D., *Professor of Zoology.*

EDWARD VERNON HOWELL, A. B., Ph. G., *Professor of Pharmacy.*

CHARLES HOLMES HERTY, Ph. D., *Smith Professor of General and Industrial Chemistry.*

WILLIAM CHAMBERS COKER, Ph. D., *Professor of Botany.*

ANDREW HENRY PATTERSON, A. M., *Professor of Physics.*

ALVIN SAWYER WHEELER, Ph. D., *Professor of Organic Chemistry.*

JAMES MUNSIE BELL, Ph. D., *Professor of Physical Chemistry.*

WILLIAM LEWIS JEFFRIES, A. M., *Instructor in Chemistry.*

JOHN GROVER BEARD, Ph. G., *Instructor in Pharmacy.*

VIVIAN LEROY CHRISLER, A. M., *Instructor in Physics.*

WESLEY CRITZ GEORGE, A. M., *Instructor in Zoology.*

HENRY ROLAND TOTTEN, A. B., *Instructor in Botany.*

LUCIUS COLEMAN HALL, *Assistant in Chemistry.*

OSCAR ASA PICKETT, *Assistant in Chemistry.*

WILLIAM NELSON PRITCHARD, JR., *Assistant in Chemistry.*

EDWIN FULLER CONRAD, *Assistant in Physics.*

HISTORICAL SKETCH

The School of Medicine was established in 1879 and Dr. Thomas W. Harris was chosen to direct its work. A course of two years was offered in theoretical and practical medicine, but owing to the limited facilities this plan was not found practicable and was abandoned in 1886. In 1890, however, the School was reopened and, under the direction of Dr. R. H. Whitehead, a course of one year, embracing only the elementary subjects—Anatomy, Chemistry, Physics, Physiology, etc.—was offered. As the requirements leading to the degree of Doctor of Medicine were increased by the leading medical colleges, the course was extended to embrace the first two years of the four year curriculum. In 1902 a Clinical Department was established at Raleigh, but since the funds for a proper equipment could not be provided, this was abandoned in 1909. In 1898 the School was admitted to membership in the Association of American Medical Colleges, and in 1901 was incorporated as an integral part of the University, on the same footing as the Graduate and the other professional schools.

COURSES OFFERED

The following courses are offered:

1. A Preparatory or Pre-medical Course: a course of one year of college work in which special attention is given to Chemistry, Physics, and Zoology. This is the minimum requirement for admission to the Medical School.
2. A Combined Course Leading to the Degree of Bachelor of Science: This consists of a prescribed college course of two years and the medical course of two years. On completing this four year course the School of Applied Science offers the degree of Bachelor of Science. The student is therefore able to obtain the scientific degree and the degree of Doctor of Medicine in six years.
3. The Medical Course: The American Medical Association, the Association of American Medical Colleges, and other medical organizations recommend for the degree of Doctor of Medicine a graded course of four years in a medical school. They also suggest an arrangement of subjects in which the so-called laboratory subjects are to be given in the first two and the clinical subjects in the last two years. The medical course covers the subjects of the

first two years. On completing the course a certificate is given which is accepted in full by most of the medical schools.

THE CURRICULUM

Preparatory or Premedical Course

Select one	{	Zoology 1-2, 3 hrs.	Chemistry 1-2, 3 hrs.
		Physics B, 6 hrs.	Chemistry 33, 1½ hrs.
		German 1-2, 3 hrs.	Chemistry 44, 1 hr.
		or	History of Med. 1 hr.
		{ French 1-2, 3 hrs.	

The Combined Course: College Studies

FIRST YEAR		SECOND YEAR	
Select one	{	English 1-2, 3 hrs.	English 3-4, 3 hrs.
		Mathematics 1-2, 4 hrs.	Physics 1-2, 3 hrs.
		Chemistry 1-2, 3 hrs.	Zoology 1-2, 3 hrs.
		Botany 1-2, 3 hrs.	Chemistry 33, 1½ hrs.
		German 1-2, 3 hrs.	Chemistry 44, 1 hr.
		French 1-2, 3 hrs.	German 1-2 or 21-22, 3 hrs.
		{ Latin 1-2, 4 hrs.	French 1-2 or 3-4, 3 hrs.
Select one	{		Latin 1-2, 4 hrs.
			Drawing 1-2, 2 hrs.
			History 1-2, 3 hrs.
		{ Physics 3-4, 2 hrs.	

In the College of Liberal Arts two hours of laboratory work are counted as one hour. In the premedical course and in the combined course this system is followed. In the medical curriculum two hours of laboratory work are counted as two hours.

The Medical Course

FIRST YEAR

BIOLOGICAL CHEMISTRY—*Six hours a week until April 1.*

TOXICOLOGY—*Six hours a week from April 1 to the end of the term.*

COMPARATIVE ANATOMY—*Six hours a week, fall term.*

HUMAN ANATOMY—*Ten hours a week, fall term; fifteen hours a week, spring term.*

HISTOLOGY—*Nine hours a week, fall term.*

EMBRYOLOGY—*Six hours a week, spring term.*

PHARMACY—*Six hours a week, spring term.*

SECOND YEAR

HUMAN ANATOMY—*Nine hours a week, fall term.*

NEUROLOGY—*Six hours a week, fall term.*

BACTERIOLOGY—*Nine hours a week, fall term.*

PHYSIOLOGY—*Five hours a week, fall term; ten hours a week, spring term.*

PHYSIOLOGICAL CHEMISTRY—*Six hours a week, fall term.*

PATHOLOGY—*Twelve hours a week, spring term.*

PHARMACOLOGY—*Ten hours a week, spring term.*

MINOR SURGERY and PHYSICAL DIAGNOSIS—*Four hours a week, spring term.*

SUMMARY OF FIRST AND SECOND YEARS

<i>Subjects</i>	<i>Hours</i>
Chemistry	288
Anatomy	868
Physiology	255
Bacteriology	144
Pathology	200
Pharmacology	167
Pharmacy	90
Minor Surgery and Physical Diagnosis	60

Total.....2072 hours

ENTRANCE REQUIREMENTS

I. Requirements for admission to the Pre-medical and Combined Courses. The requirements for admission to the pre-medical and combined courses are fourteen units (corresponding to a course of four years in the High School), of which eight units are prescribed and six are elective. The prescribed units are as follows: English 3 units, Mathematics 2 units, American history and civics 1 unit, foreign language (Latin, Greek, German, or French) 2 units. The elective units may be selected from the following: English language and literature 1 to 2 units; foreign language 1 to 4 units; natural science, physics, chemistry (one year each), biology, zoology, botany, physiology (one-half year each) $\frac{1}{2}$ to 2 units; physiography, $\frac{1}{2}$ unit; history 1 to 3 units; drawing 1 unit.

Candidates should present at least two units of German or

French since they are required for admission to German 1 or French 1 in the pre-medical course. Equivalent courses are offered in the Summer School of the University. In the event of a failure to present such units for admission the student will be required to take German A or French A in the pre-medical course and German 1-2 or French 1-2 in the first year of the medical course.

At the discretion of the Committee on Entrance Certificates candidates may be admitted with conditions, provided the total number of units offered does not fall below a minimum of 12 units, and provided the conditions are of such nature that, in the judgment of the Committee, they may be removed on or before September of the following year. Provision is made for the removal of conditions in a limited number of subjects during the Summer School.

II. Requirements for Admission to the Medical Course. The requirements for admission to the medical course are one year of college work, embracing the following subjects: Chemistry, Biology, Physics, and German or French, the equivalent of the pre-medical course as outlined on page 164.

Candidates may be admitted with two conditions, one in language and one in science when, in the judgment of the Dean, the conditions may be carried without detriment to the medical course and may be removed on or before September of the following year.

ANNOUNCEMENT: *Beginning with the session 1917-1918, the requirements for admission to the medical course will be two years of college work. This will include one year of Chemistry, Physics, Biology, one modern language (French or German), and such other college courses as may be acceptable to the Dean to count a minimum of thirty college hours.*

III. Admission to Advanced Standing. Candidates for admission to the second year of the medical course must present certificates from an accredited medical school stating that they have had the required fourteen units, the year of college work as indicated in Section II, and have completed the subjects of the first year of the medical course as outlined on page 164. Candidates may be admitted with not more than two conditions when, in the judgment of the Dean, the conditions may be carried

without detriment to the medical course and may be removed on or before February of the same year.

EXAMINATIONS

Regular examinations are held during the two regular examination periods of the College of Liberal Arts. Special examinations will be given for the purpose of making up deficiencies during registration week. A fee of \$5.00 will be charged each applicant for an examination at any other time. An examination will not be allowed if the student is charged with ten per cent of unexcused absences or with absences amounting to twenty per cent of the total number of hours assigned to the subject.

CERTIFICATES

A certificate will be granted to a student who completes satisfactorily the required preliminary work and the medical course. In the event of a failure to complete the work a statement indicating the subjects completed will be given. No credits will be allowed for attendance only.

EQUIPMENT

The new medical building, Caldwell Hall, completed in 1912, is located on the south side of Cameron Avenue opposite Davie Hall, facing north. This location secures the north light in all of the laboratories used for microscopic work.

To the north is the main building, 117 x 64, and adjoining this, to the south, is a wing, 63 x 36, each containing a basement and two floors. The first floor of the main building is bisected from north to south by an entrance hall 14 feet wide, and from east to west by a corridor 8 feet wide, dividing the floor space into four equal parts. Each part is subdivided into one large class laboratory, 34 x 27, and two private laboratories, 14 x 12½. The class laboratories lie next to the entrance hall. Those on the north side will be used for microscopic work in Histology and Embryology. They are lighted from five large windows on the north side. On the south side are the laboratories for Physiological Chemistry and Experimental Physiology.

The private laboratories, located on the farther side of the class laboratories, are occupied by the instructors. The office of the

Dean is in one of the private laboratories on this floor and may be entered from the west end of the corridor.

The second floor is a duplicate of the first floor with the exception that the space above the entrance hall is enclosed and is used for the Departmental Library. On the north side are the Bacteriological and Pathological laboratories, and on the south side the Pharmacological laboratory and a lecture room. The laboratories here have the same arrangement as those on the first floor. Nearly opposite the Pathological laboratory is the Pathological Museum.

At the ends of the corridor on the first and second floors are small fire proof rooms which will be used for incubators, thermostats, and other purposes requiring the continuous use of oil or gas lamps.

In the basement of the main building provision is made for the care of animals. The floors of the several apartments are covered with cement and are inclined to a common drain pipe. The rooms are well ventilated, lighted, and heated, and provided with all necessary facilities for proper sanitation.

On the first floor of the wing adjoining the main building is the main lecture hall, and in the rear of this is the amphitheatre for anatomical demonstrations. In the rear of the amphitheatre is the Anatomical Museum.

On the second floor of the wing are the anatomical laboratories. In the centre, and occupying a large part of the floor space, is the main dissecting hall, which has a cement floor and is lighted by six large windows and two skylights. On either side of a short corridor at the front are two private laboratories for special dissections, and at the end of the corridor the two laboratories for the instructors. The latter are entered from the upper hall of the main building. In the rear of the main dissecting hall are the lavatory and locker rooms.

The basement of the wing is divided by a solid brick wall from east to west. On the north of this wall are the store rooms, a photographic room, a room for the refrigerating and gas plants; on the south side are the storage tanks for cadavers, the incinerator, and other arrangements for the care of anatomical material. In the rear end of the basement is an entrance hall containing the elevator and the stairs leading to the amphitheatre and the dissecting hall. The building is heated from the central heating plant and

abundantly supplied with water and electric light. The dissecting hall is supplied with hot and cold water.

The laboratories are well equipped with apparatus for the use of the students and the research work of the teachers. Animals are available in adequate numbers for all proper experimental work.

The Departmental Library contains approximately three thousand volumes. The more important periodicals pertaining especially to the subjects offered in the course are received regularly and kept on file.

The medical students have free access to the general Library, the Chemical, Physical, and Biological laboratories, which are described in Part Five of the general catalogue.

THE GENERAL PLAN OF INSTRUCTION

In the arrangement and conduct of the courses an effort is made to follow modern ideals in medical education. A year of college training in Chemistry, Physics, and Zoology is insisted upon as the minimum preparation for the study of medicine. In order, however, to encourage a more thorough preparation, the degree of Bachelor of Science is offered to those students who complete a prescribed college course of two years and the two years of the medical course. In offering this degree the value of a properly directed college course of four years is not minimized, but on the contrary is earnestly recommended.

In the arrangement of the course of studies the attempt is made to have the subjects follow in natural sequence. Elementary courses in General Chemistry, Physics, and Zoology having been completed in the pre-medical year, more advanced courses in these subjects are pursued. In the first year Organic Chemistry, and Comparative Anatomy, with special reference to the requirements of the medical student, Gross Human Anatomy, Histology, Embryology, and an elementary course in Pharmacy are studied. In the second year Human Anatomy, Physiological Chemistry, and Bacteriology are completed in the first half; *Materia Medica* and Pharmacology, Pathology, and Normal Physical Diagnosis in the second half. Physiology is begun and completed in the second year. At the expiration of the two years the student will have completed the fundamental branches of medicine, and will be prepared to enter upon the study of the more practical subjects.

In the plan of instruction the laboratory method, supplemented by systematic lectures and demonstrations, is pursued. The lectures and the laboratory courses are given contemporaneously as far as possible, for it is believed that the student, in this way, not only acquires technical skill, but a more thorough knowledge of the subject.

When advisable the classes are divided into small sections so that the work of the students is under the direct supervision and close observation of the instructor. Frequent oral and written quizzes and a final examination are required in each subject, and in the laboratory courses each student is required to record the observations in a note book, which must be submitted from time to time to the instructor and is held for a part of the final grade.

Regular attendance upon all classes is required of each student. A student who is absent twenty per cent of the total number of hours assigned each subject, or is charged with ten per cent of unexcused absences, is denied the privilege of an examination in the subject in which the absences occur.

EXPENSES

The following are the charges a term payable at the beginning of each term in September and January respectively:

Tuition	\$35.00
Fee for matriculation (registration, etc.)....	15.00
Total	\$50.00

In addition the following fees will be charged for laboratory courses a term:

Chemistry 33, \$7.50; Chemistry 44, \$5.00; Chemistry 71-72, \$5.00; Physiological Chemistry, \$5.00; Zoology 1-2, \$3.00; Zoology 3-4, \$5.00; Botany 1-2, \$3.00; Experimental Physiology, \$5.00; Experimental Pharmacology, \$5.00; Pharmacy, \$5.00; Bacteriology, \$2.50; Pathology, \$2.50; Histology, \$2.50 (fall); dissecting material, \$5.00; the use of a microscope, \$1.00.

The laboratory fees are divided approximately equally among the four terms. The total charge is between \$60.00 and \$63.00 a term.

Good board is furnished at Swain Hall for \$12.50 a month. In the village board without rooms may be secured for from \$10.00 to \$16.50 a month. The rent of rooms in the dormitories ranges from seventy-five cents to \$6.00 a month for each occupant. For each room a charge of \$2.00 a month is made for electric light and heat.

PRIZES AND SCHOLARSHIPS

THE WOOD SCHOLARSHIP. (Established in 1895.) Mrs. Mary Sprunt Wood, of Wilmington, has founded, in memory of her husband, the late Dr. Thomas Fanning Wood, a scholarship, covering the tuition and fees.

COURSES OF INSTRUCTION

PRE-MEDICAL COURSES

History of Medicine

1. A condensed outline of the evolution and development of Medicine and Surgery. Required of students in the pre-medical course. *Both terms, one hour.* Professor MACNIDER.

Chemistry

1-2. General Descriptive Chemistry: a study of the elements and their compounds, including an introduction to organic chemistry. Lectures with laboratory work. Students entering with Chemistry credits may take special laboratory work in inorganic preparations. *Both terms, three hours.* Professor VENABLE, Messrs. JEFFRIES and HALL.

Laboratory fee, \$2.50 a term.

33. Qualitative Analysis: Premedical: laboratory work with lectures; practice is given in the qualitative analysis of known and unknown mixtures. Required. *Fall term, three hours.* Professor WHEELER and Mr. PRITCHARD.

Laboratory fee, \$7.50.

44. Elementary Quantitative Analysis: Pre-medical: a brief course in gravimetric methods followed by a more extended course in volumetric methods. Required. *Spring term, two hours.* Professor BELL and Mr. PRITCHARD.

Laboratory fee, \$5.00.

61-62. Organic Chemistry: lectures and laboratory work. Prerequisite, Chemistry 31-32. Elective. *Both terms, three hours.* Professor WHEELER.

Laboratory fee, \$4.00 a term.

63-64. Organic Chemistry: laboratory including analysis of (a) pure organic compounds, (b) food products, (c) commercial dye stuffs. Elective. Prerequisite, Chemistry 61-62 or 71-72. *Both terms, two hours.* Professor WHEELER.

Laboratory fee, \$6.00 a term.

71-72. Biological Chemistry: Lectures and laboratory work. (a) A general survey of Organic Chemistry and the synthetic preparation of compounds of special interest to medical men. (b) A more detailed study of the fats, carbohydrates, and proteins, including laboratory work. Text: Haskin's *Organic Chemistry*. *Fall term and Spring term to April, three hours.* Professor WHEELER and Mr. PICKETT.

Laboratory fee, \$5.00 a term, including Chemistry 74.

74. Toxicology: laboratory work; the chemical behavior of poisons and their separation from foods and organs are studied in the laboratory. Text: Autenrieth and Warren's *Detection of Poisons*. Required. *Spring term after April 1, three hours.* Professor WHEELER and Mr. PICKETT.

Physics

B. Elementary Physics for medical students: the fundamental facts of Physics are studied with some special attention to heat, light, and electricity. Textbook, lectures, and laboratory work. *Both terms, six hours.* Professor PATTERSON and Messrs. CHRISLER and CONRAD.

Certificates of Physics work done elsewhere than in a college of approved standing will not be accepted in lieu of this course.

Laboratory fee, \$2.00 a term.

1-2. General Physics: lectures, with text-book; problems; laboratory work. Prerequisite, Mathematics 1-2. *Both terms, four hours.* Professor PATTERSON and Mr. CHRISLER.

Laboratory fee, \$1.50 a term.

3-4. Electricity and Magnetism: a study of the phenomena of electricity and magnetism, and their application in modern life, including the use of the X-rays, the rays of Radium and other applications in Electrotherapeutics. Laboratory work required. Elective. *Both terms, two hours.* Professor PATTERSON.

Laboratory fee, \$2.00 a term.

Zoology

1-2. Elements of Zoology; pre-medical; an introductory course giving an outline of the classification and structure of animals, fundamentals of histology, embryology, and physiology, with some consideration of biological theories; lectures with laboratory work. Professor WILSON and Mr. GEORGE.

Laboratory fee, \$3.00 a term.

3-4. Comparative Anatomy of Vertebrates (first half); medical; dissection of vertebrate types: amphioxus, cyclostome, fish, bird, mammal. Professor WILSON.

Laboratory fee, \$5.00 a term.

Botany

1-2. General Botany: an introduction to the structure and classification of plants; lectures with laboratory work. Elective in the first year. Professor COKER and Mr. TOTTEN.

MEDICAL COURSES

Histology

1. General Histology and Organology. This course includes (a) the study of fundamental tissues, followed by (b) the study of the microscopic structure of the various organs, and (c) the fundamentals of histological technique. Lectures, recitations, and laboratory. Text, Piersol. *Fall term, nine hours a week.* Professor BULLITT and Mr. BROCKMANN.

2. Advanced Histology: To those who have completed course 1 or its equivalent opportunity will be offered to pursue advanced work or original investigation in this subject. Arrangements for this course may be made with Professor BULLITT.

Course 1 is required of all medical students. Course 2 is elective.

Anatomy

Professor MANGUM, Associate Professor LAWSON and Mr. HUFF.

The courses in anatomy are made as practical as possible. The student makes a complete dissection of all structures under the constant supervision and direction of an instructor, who insists upon the use of text-books, guides and atlases, and holds practical examinations upon all parts dissected. Laboratory talks, demonstrations and conferences take the place of lectures. In those subjects most difficult for the beginner the structures are demonstrated to each individual student.

The courses include gross anatomy, the topography of the body, the application and relation of anatomy to medicine and surgery, the microscopic anatomy of the central nervous system and human embryology. For course in Histology see page 173. Ample facilities are offered to those who may desire to pursue advanced work of original investigation in the field of anatomy.

FIRST YEAR

1. Osteology, arthrology, descriptive anatomy of the thoracic and abdominal viscera, topographical anatomy of the thorax and abdomen, and the dissection of one-half of the structures of the body. *Both terms.*

2. Embryology: The processes of development as manifested in the embryos of the frog, the chick and the pig. The work in the laboratory is supplemented by a course of lectures upon the development of the human body. *Spring term.*

SECOND YEAR

3. The completion of the dissection of the body. *Fall term.*

4. Topographical and Applied Anatomy: given in connection with the work in the dissecting room. Embraces the external markings of the organs (viscera, vessels, nerves, etc.), their location and inter-relationships, and the application of anatomy to medicine and surgery. Dissections, models, preparations, and numerous drawings by the students are used as aids in this course. At the end of the second year a final examination is held upon the entire subject of gross anatomy. *Fall term.*

5. Neurology: A special laboratory study of the gross and microscopic anatomy of the cord and encephalon. Each student is provided with numerous prepared dissections of the human

brain and a series of sections through the cord and the brain stem which he studies with the aid of a guide. A human brain is then given to each group of four men and by them dissected in order to correlate and systematize the work already done. A practical examination tests the student's ability to locate the various tracts and nuclei. *Fall term.*

Texts: Cunningham, Gray and Piersol; Cunningham's *Manual*; Heisler's *Practical Anatomy; Brain and Spinal Cord* (Villiger); *Anatomy of the Brain* (Whitehead); *Development of the Human Body* (McMurrich); *Laboratory Text Book of Embryology* (Minot).

Physiology

Professor MANNING.

The course in Physiology is given in three parts, as follows:

1. General Physiology: a lecture course of five hours a week extending through the year; a brief account of cell physiology is followed by a detailed discussion of the facts and theories of Human Physiology; attention is called to the application of physiology in medical practice as far as possible. Text: Howell.

2. Physiological Chemistry: a laboratory course of six hours a week during the fall term. The purely chemical aspects of Biochemistry are considered in the course in organic chemistry (Chem. 71-72) given in the first year. In the course in Physiological Chemistry a practical application of the principles of Biochemistry is made in the study of Human Physiology. The chemistry of digestion, of the secretions, of blood, and of the urine is studied in detail, qualitatively and quantitatively, and such tissues are examined as will afford evidence of the course of metabolic processes. Laboratory Notes. References: Hammarsten, Hawk.

3. Experimental Physiology: a laboratory course of five hours a week during the spring term. In this course the student studies the heart and neuro-muscular systems on the turtle and the frog; the circulatory, respiratory, and glandular systems on the mammal. In the former the class is divided into groups of two and in the latter into groups of four. Each group is supplied with mimeographed directions for the performance of each experiment and a full equipment of apparatus, and each student is required to

keep a record of the observations, including tracings. Reference: Stewart, Porter, Hill, etc.

Materia Medica and Pharmacology

Professor MACNIDER and Mr. KIRKPATRICK.

1. **Materia Medica**: the general consideration of the subject is given in the first year of the medical curriculum. In the second year the important drugs are studied in groups, the classification depending upon their physiological action. Emphasis is given to the most important drugs, and their physiological action is studied in detail.

2. **Prescription Writing**: as early as possible in the course the student's attention is directed to the logical application of various drugs to the relief of morbid conditions. Hypothetical conditions are discussed, and each student writes one or more prescriptions and gives his reasons for the use of the various drugs he employs. The prescriptions are discussed and criticised by the students and the instructor.

3. **Pharmacodynamics**: this part of the general course in Pharmacology consists in a careful and accurate study of the action of practically all of the more important drugs on the lower animals. For this work, the higher animals, such as the cat and dog, are chiefly used. The class is divided into groups of two or four, and the experimental work is conducted by the student. Each student is required to hand in to the instructor, at the completion of the course, a laboratory note book containing a detailed account of each experiment, an explanation of the results obtained, and the tracings made during the experiments. Oral and written recitations are frequently held. Text: Cushny, *Pharmacology and Therapeutics*. Reference: Sollman.

4. **Advanced Pharmacology**: two types of courses will be offered: (a) an experimental study of the action of various drugs upon the normal animal; (b) an experimental study of the action of various drugs and other agents upon the pathological animal.

Bacteriology

Professor MACNIDER and Mr. KIRKPATRICK.

The student learns by practical experience the methods of cultivating, staining, and identifying the principal pathogenic bac-

teria. A few non-pathogenic and saprophytic forms are studied. The pathological significance of the various forms is explained by lectures, and the pathogenicity of some of the forms is determined by inoculation experiments performed by the class. At intervals during the course unknown organisms are given for identification. In addition to this, each student is required to isolate from the air, water, fecal matter, or pus two organisms and determine their species. The latter part of the course is devoted to the bacteriological study of milk and water. Text: Jordan. Reference: Park and McFarland.

Minor Surgery and Physical Diagnosis

Associate Professor LAWSON.

The class practices the application of bandages, and learns the modern method of dressing wounds. A short course in Physical Diagnosis is given. Text: Davis on Bandaging.

Pharmacy for Medical Students

Assistant Professor BEARD and Mr. ALLEN.

This course in pharmacy will consist of two lectures supplemented by two laboratory periods each week. Beginning with a consideration of the metric system as applied to writing prescriptions and preparing formulae, the course will embrace successively, medical arithmetic, prescription writing, official galenical and magistral preparations with their doses, cellulose and its compounds, carbohydrates, coal and wood tar products, resins, gums, esters, volatile oils, alkaloids, animal drugs, and lastly solubility and incompatibility. The student will be required to make the preparations commonly prescribed, in order that he may be acquainted with their nature and composition. In addition he must demonstrate the various forms of incompatibility liable to occur in prescriptions. Text-book: DeLorme's *Manual of Pharmacy for Physicians*. First year. Spring term, six hours.

Hygiene

Professor MANNING.

A short course in the elementary principles of Hygiene and Sanitation.

Pathology

Professor BULLITT and Mr. BROCKMANN.

1. General and Special Pathology: this course embraces a thorough consideration of general pathological processes from their chemical and physiological as well as their morphological aspects. The subject of Special Pathology is considered upon the same broad basis. The course includes a series of lectures and recitations combined with laboratory work and demonstrations of gross and microscopic preparations. Text, McFarland. *Spring term*, lectures and recitations, *four hours a week*. Laboratory *nine hours a week*. Prerequisite, Histology 1.

2. Advanced Pathology: opportunity for advanced work in Pathology or for original investigation will be offered to a limited number of students upon the presentation of satisfactory evidence of ability to pursue work of this character.

Course 1 is required of all medical students. Course 2 may be elected by special arrangement with Professor BULLITT.

Advanced Courses for Practicing Physicians

Opportunity for advanced work or for original investigations is offered in all of the laboratories to practicing physicians by special arrangement with the instructors.

SCHEDULE OF RECITATIONS

FIRST YEAR							SECOND YEAR						
HOUR TERM	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
Fall	Chem. 71-72	Histology	Chem. 71-72	Histology	Histology	Histology	Anatomy 2	Anatomy 3	Anatomy 2	Anatomy 3	Anatomy 2	Anatomy 3	
8:30							Pharma-cology	Pharma-cology	Pharma-cology	Pharma-cology			
Spring	Chem. 71-72	Anatomy	Chem. 71-72	Anatomy		Anatomy	Pharma-cology	Pharma-cology	Pharma-cology			Pathology	
Fall	Histology	Histology	Histology	Histology	Histology	Histology	Anatomy 2	Anatomy 3	Anatomy 2	Anatomy 3	Anatomy 2	Anatomy 3	
9:45													
Spring	Pharmacy	Anatomy	Pharmacy	Anatomy		Anatomy	Physiology	Physiology	Physiology	Physiology	Physiology	Pathology	
Fall	Histology	Histology	Histology	Histology	Histology	Histology	Anatomy 2	Bacteriology	Anatomy 2	Bacteriology	Anatomy 2	Bacteriology	
10:40													
Spring	Embryology	Anatomy	Embryology	Anatomy		Anatomy	Pharma-cology	Pathology	Bacteriology	Pathology	Physiology	Pathology	
Fall	Anatomy	Anatomy	Anatomy	Anatomy		Anatomy						Bacteriology	
11:35							Pharma-cology	Pathology	Pathology	Pathology	Physiology	Pathology	
Spring	Embryology		Embryology				Physiology	Physiology	Physiology	Physiology	Physiology		
Fall	Anatomy	Anatomy	Anatomy	Anatomy		Anatomy	Pharma-cology	Pathology	Pathology	Pathology	Physiology		
12:30													
Spring	Embryology	Anatomy	Embryology	Anatomy		Anatomy	Physiology	Pathology	Physiology	Pathology	Physiology		
Fall	Chem. 71-72	Zoology 3-4	Chem. 71-72	Zoology 3-4	Zoology 3-4	Zoology 3-4	Physiology	Bacteriology	Physiology	Bacteriology	Physiology		
2:30													
4:30													
Spring	Chem. 71-72	Pharmacy	Chem. 71-72	Pharmacy			Pharma-cology	Minor Surg. & Ph. Diag.	Hygiene	Minor Surg. & Ph. Diag.	Physiology		

THE SCHOOL OF PHARMACY

FACULTY

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., PRESIDENT.

EDWARD VERNON HOWELL, A. B., Ph. G., DEAN.

EDWARD VERNON HOWELL, A. B., Ph. G., *Professor of Pharmacy.*

JOHN GROVER BEARD, Ph. G., *Assistant Professor of Pharmacy.*

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., *Francis Preston Venable Professor of Chemistry.*

HENRY VAN PETERS WILSON, Ph. D., *Professor of Zoology.*

WILLIAM DEBERNIERE MACNIDER, M. D., *Professor of Pharmacology.*

ISAAC HALL MANNING, M. D., *Professor of Physiology.*

CHARLES HOLMES HERTY, Ph. D., *Smith Professor of General and Industrial Chemistry.*

WILLIAM CHAMBERS COKER, Ph. D., *Professor of Botany.*

ALVIN SAWYER WHEELER, Ph. D., *Professor of Organic Chemistry.*

JAMES MUNSIE BELL, Ph. D., *Professor of Physical Chemistry.*

WILLIAM LEWIS JEFFRIES, A. M., *Instructor in Chemistry.*

VIVIAN LEROY CHRISLER, A. M., *Instructor in Physics.*

WESLEY CRITZ GEORGE, A. M., *Instructor in Zoology.*

HENRY ROLAND TOTTEN, A. B., *Instructor in Botany.*

WILSON WILLIAM ALLEN, *Assistant in Pharmacy.*

RICHARD HOMER ANDREWS, Ph. G., *Assistant in Pharmacy.*

LUCIUS COLEMAN HALL, *Assistant in Chemistry.*

OSCAR ASA PICKETT, *Assistant in Chemistry.*

WILLIAM NELSON PRITCHARD, *Assistant in Chemistry.*

EDWIN FULLER CONRAD, *Assistant in Physics.*

HISTORICAL SKETCH

In 1880, Doctor Thomas W. Harris of the Medical School of the University, was instrumental in establishing a Pharmacy

School in connection with the School of Medicine. Doctor Harris was Professor of Anatomy, Materia Medica, and Pharmacy. The faculty of the School of Pharmacy consisted, in addition to Professor Harris, of Frederick W. Simonds, Professor of Botany and Physiology, and Francis P. Venable, Professor of Chemistry. The course in pharmacy extended over two sessions of five months each, and led to the degree of Graduate in Pharmacy (Ph. G.). The School was continued until the resignation of Doctor Harris in 1886, when it was abandoned completely. In the fall of 1889 the School was revived by Doctor Richard H. Whitehead, but again its career was cut short.

In March of 1897 the present School of Pharmacy was established and Edward Vernon Howell, A. B., Wake Forest College, and Ph. G., Philadelphia College of Pharmacy, was elected Professor of Pharmacy and given charge of the School. The School occupied the ground floor of the New West building, which had been provided with laboratories, lecture rooms, a herbarium, and a reading room. The first lectures, offered in September of 1897, pertaining to practical and theoretical pharmacy, materia medica, physiology, physics, general and analytical chemistry, and botany. The course extends over two sessions of nine months each and leads, as did the courses in the initial school, to the degree of Graduate in Pharmacy (Ph. G.).

The School has gradually developed with respect to members of the faculty, equipment, apparatus, and attendance. In the summer of 1912, it was moved to Person Hall, a commodious well-lighted, well-ventilated building containing ten rooms. The pharmaceutical library has been made valuable by many historical and modern books on pharmacy and its allied branches, by bound volumes of proceedings and journals, either given by friends or purchased by the University. In 1914, two new courses in pharmacy were added to the curriculum: one, a three year course, leads to the degree of Doctor of Pharmacy (P. D.); the other, also a three year course, leads to the degree of Pharmaceutical Chemist (Ph. C.).

ADVANTAGES

The location of the School of Pharmacy at the seat of the University assures to the students the most modern scientific instruction with all the laboratory facilities of the undergraduate department, as well as the courses of instruction in the allied

branches. These opportunities will meet the requirements of a large number of students who were compelled heretofore to obtain their pharmaceutical education in other states. Briefly stated, the advantages are as follows:

1. Thorough, careful, *individual* training.
2. The practical experience derived from active work in the laboratories.
3. Intimate association with the other departments of the University, to all of which the student of Pharmacy has access, and the daily contact with students pursuing various branches of learning.
4. The use of the large library and reading room and the well equipped gymnasium.
5. The comparatively small cost at which a course in pharmacy may be obtained.
6. Advanced work in pharmacy such as can be had in only a few schools of pharmacy in the South.

The success of students of this school in their examinations before the State boards has been very gratifying. These students have been applicants before the State boards of Maryland, Pennsylvania, Virginia, North and South Carolina, Tennessee, Alabama, Georgia, and Florida.

ADMISSION

Candidates for admission into the School of Pharmacy should present themselves on the same days and at the same hours with candidates for admission into the college. For the next academic year these days will be *Monday, Tuesday, or Wednesday, September 6, 7, or 8, 1915*, and *Monday or Tuesday, January 3, or 4, 1916*. The session of the School of Pharmacy is of the same length as the College year, beginning *September 9, 1915* and ending *May 31, 1916*.

Candidates for the degree of Ph. G. must be, on entering, at least 17 years old, and must have completed a high school course of study. They may however enter the first year course without those prerequisites.

The members of the School of Pharmacy enjoy all the privileges extended to other students in the University.

EXPENSES

The charges for each term are payable at the beginning of the term. They are as follows:

Tuition	\$30.00
Registration and incidental fees	15.00

There are additional fees as follows:

FIRST YEAR

Chemistry 1-2 (each term)	\$2.50
Physics A (each term)	1.00
Pharmacy (each term)	2.50

SECOND YEAR

Chemistry 31-32 (each term)	\$5.00
Chemistry 74 (April and May)	2.50
Pharmacy	2.50

THIRD YEAR

Chemistry 41-42 (each term)	\$7.50
Chemistry 61-62 (each term)	4.00
Chemistry 63-64 (each term)	6.00

The students of Pharmacy are entitled to the use of the gymnasium, the library, and reading room, and, in case of sickness, to medical attention and the use of the infirmary.

Good board is furnished at Swain Hall for \$12.50 a month. In the village board without rooms may be secured for from \$10 to \$16.50 a month. The rent of room ranges from seventy-five cents to \$6.00 a month. For each room is made a charge of \$2.00 a month for electric light and heating.

PRIZES

THE BRADHAM PRIZE, offered by Mr. C. D. Bradham, of New Bern, N. C., will be given to the student making the highest general average during the two years of study.

THE J. G. BEARD PRIZE. To the student who makes the best general average during the first year of study and who passes the North Carolina Board of Pharmacy Examination at the completion of the same year will be given a membership in the North Carolina Pharmaceutical Association.

Prizes will also be given:

1. For the best thesis.
2. For the best collection of native medicinal herbs.
3. For the best exhibit of chemical salts made by a second year student.
4. For the best work in the recognition of *materia medica* specimens.
5. To the student recognizing the largest number of pharmaceutical preparations.

EXAMINATIONS

Final examinations are held at the end of each term on the subjects embraced in the course.

Quizzes upon the different branches are held regularly. Specimen quizzes upon *Materia Medica*, Chemistry, and Pharmacy are held once a week, and consist in the recognition and correct writing of the official names of the specimens presented.

Students are required to make an average of 70 per cent on all examinations and quizzes.

COURSES LEADING TO THE DEGREE OF GRADUATE OF PHARMACY

In order to be recommended for the degree of Graduate of Pharmacy (Ph. G.) the student must have completed with credit the course of study outlined below. The course extends over two sessions of nine months each. The student must have completed the work of both sessions in the School of Pharmacy of this University, or of one session (the second) here after one in some other recognized school of Pharmacy. He must obtain satisfactory marking in attendance, making a general average of 70 per cent in the various branches, and submit a satisfactory thesis. The thesis must be an original essay embodying the results of the student's personal research in some branch of Pharmacy, which he has prosecuted under the direction of the professor who assigned him the subject. The subject of such thesis must be announced on or before February 1 to the Dean of the Faculty. On May 2 the thesis shall be read before the Dean of the School, subject to criticism and correction. The corrected and approved thesis must be handed to the Registrar in typewritten form on or

before May 15. It will be published at the discretion of the Dean of the School. The student must have had a practical experience of at least four years with some qualified pharmacist in a dispensing store. Satisfactory evidence on this point must be submitted to the Dean of the School, and a certificate deposited with the Registrar on or before May 15. Students who have not had the full four years' experience will be permitted to stand examinations for graduation; but their diplomas will be withheld until they shall have satisfied this requirement. Of the three years of experience required for license by the State Board of Pharmacy, the work done in the Pharmaceutical laboratory will count for one and only one.

FIRST YEAR

Pharmacy 1 (5)
Pharmacy 4 (4)
Pharmacy 8 (3)
Pharmaceutical Botany (3) or
Elementary Physics A (3)
Chemistry 1-2 (3)

SECOND YEAR

Pharmacy 2 (5)
Pharmacy 5 (8)
Pharmacy 6 (3)
Materia Medica (5)
Materia Medica and Pharmacology (5) (optional)
Chemistry 31-32 (2)
Chemistry 74, April and May (3)
Physiology (3) Fall term.

COURSES OF INSTRUCTION

Pharmacy

1. Theory and Practice of Pharmacy. This course consists of lectures upon the following subjects, with practical demonstrations and the employment of proper apparatus whenever necessary: metrology, comminution, heat evaporation, distillation, sublimation; fusion, calcination, granulation, oxidation, reduction, etc.; solution of solids, liquids, and gases; deliquescence, efflorescence, etc.; colation, filtration, decolorization, clarification, precipitation, etc.; macration, expression, infusion, decoction, etc.; per-

colation, and study of the following: waters, syrups, honeys, glycerites, mucilages, mixtures, spirits, elixirs, liniments, colloids, tinctures, wines, vinegars, and fluid extracts. Text: Remington, *Theory and Practice of Pharmacy*. First year. *Both terms, five hours*. Professor HOWELL.

2. Theory and Practice of Pharmacy: The official forms and preparations of drugs are taken up in detail. Beginning with the inorganic compounds, the salts are considered with regard to their commercial qualities and pharmaceutical uses and preparations. The organic compounds are studied, commencing with the salts of the organic acids and passing to the natural and organic compounds. Second year. *Both terms, five hours*. Professor HOWELL.

4. Operative Pharmacy. (Laboratory). This course is designed to demonstrate the various operations outlined in Pharmacy 1 and to drill the student in the correct preparation or manufacture of the galenicals and simple salts of the Pharmacopoeia. He is required to make, under the direction of the instructors, those preparations which enter into a prescription and is taught the correct uses of the different apparatus required in a drug store. Text-book: Remington's *Theory and Practice of Pharmacy*. First year. *Both terms, four hours*. Assistant Professor BEARD and Mr. ALLEN.

5. Operative Pharmacy. (Laboratory). A continuation of course 4. A practical course which supplements the lectures in Pharmacy 2. Text-books: Remington's *Theory and Practice of Pharmacy* and Arny's *Principles of Pharmacy*. Second year. *Both terms, four hours*. Professor HOWELL and Mr. ANDREWS.

6. Urinary Analysis. By means of laboratory work, supplemented by lectures, the student is drilled in making thorough qualitative and quantitative analyses of urine. The phenomena of urine secretion and elimination and the physiological and pathological constituents of urine, with exhaustive tests for determining the presence or absence of these constituents, are fully dwelt upon. In addition the student is taught to select and arrange the apparatus required to make urine analyses in the drug store. Second year. *Fall term, three hours*. Text-book: Hawk's *Physiological Chemistry*. Assistant Professor BEARD.

8. Pharmacy. In this course, which deals with several branches of pharmacy, synonyms are first taken up and all common and practical names of plants and chemicals are studied. Along with synonyms, the specimens commonly seen in drug stores are shown and methods given for the recognition of each. This is followed by a detailed list of all terms descriptive of the therapeutic action of drugs. A short course is given in Pharmaceutical Latin. A student of this course will be taught to read and write correctly prescriptions in full Latin. In addition, instruction is given in the Latin prefixes and suffixes used to form the names of chemicals and galenicals.

The spring term is wholly taken up with a complete course in pharmaceutical arithmetic. Beginning with the metric system, the student is instructed in Alligation, Specific Gravity, Specific Volume, Percentage, Proportion, etc. First year. Text-book: Sturmer's *Pharmaceutical Arithmetic*. Both terms, three hours. Assistant Professor BEARD.

Materia Medica and Pharmacology

1. Pharmaceutical Botany and Materia Medica. Elementary botany is considered in the fall term of the junior year, beginning with the study of the roots, rhizomes, leaves, flowers, fruits and seeds, which are taken up in a sequence that permits of the utilization of autumnal flowers and harvest fruits for illustration. Demonstrating material, including specimens of many varieties of plants, pictures, etc., aids in providing sufficient illustration. The bearing of botany on materia medica is made prominent by introducing lists of official fruits, roots, etc., in their appropriate places, and by directing particular attention to such points of plant structure and function as are necessary for a proper understanding of drugs. The spring term of the course is devoted to materia medica. The individual drugs are considered from the standpoint of their origin, history, appearance, structure, active principles, chief medicinal properties, official preparations, and doses. These drugs are grouped and studied according to the families to which they belong. Later they are classified into the therapeutic groups based on their action, i. e., whether they are stimulants, alteratives, irritants, astringents, etc. The subject is amply illustrated from the large collection of the School which includes all the drugs of the pharmacopoeia as well as many unofficial plant parts, by means of colored plates and pictures, and

from the library, which contains a large number of valuable books on the subject. Text-book: Bastin's *College Botany* and Sayre's *Organic Materia Medica and Pharmacognosy*. First year. *Both terms, two hours*. Assistant Professor BEARD.

2. *Materia Medica*. The study of *materia medica* is continued throughout the second year. The drugs are treated as in the first year, except that the action of the drugs on the human body is dealt with at greater length, and the inorganic and animal drugs are considered as well as the organic. Serums, antitoxins, vaccines, and biologicals in general, the toxicology of the poisonous drugs, and the methods of "first aid" treatment of these poisons are studied. Text-book: Wilcox's *Materia Medica and Therapeutics*, 8th ed. Second year. *Both terms, two hours*. Assistant Professor BEARD.

3. *Materia Medica and Pharmacology*: This course is devoted to the study of the origin and constitution of remedial measures, their preparations and doses; and in particular, their physiological action and the indications for their rational use. Opportunity will be given to students to familiarize themselves with the more important crude drugs and their preparations. Instruction is given by means of lectures, recitations, and demonstrations. The lectures intended to accompany the work in Toxicology are given as a part of the course in *Materia Medica*. Professor MACNIDER.

Chemistry

1-2. General Descriptive Chemistry: the elements are studied in a systematic manner: the laws governing their combination, and the compounds resulting, are considered with appropriate reference to their occurrence and relationships to medicine. The latter part of the course is taken up with organic chemistry. Texts: McPherson's and Henderson's *General Chemistry* and Remsen's *Organic Chemistry*, supplemented by lectures and quizzes. First year. *Both terms; lectures, three hours; laboratory, one hour*. Professor VENABLE and MESSRS. JEFFRIES and HALL.

Laboratory fee, \$2.50 a term.

31-32. Qualitative Analysis: laboratory work with lectures; Practice is given in the qualitative analysis of known and un-

known mixtures. Second year. *Both terms, two hours.* Professor WHEELER and Mr. PRITCHARD.

Laboratory fee, \$5.00 a term.

74. Toxicology: laboratory work: the chemical behavior of poisons and their separations are studied in the laboratory. Text: Autenrieth and Warren's *Detection of Poisons*. *April and May, three hours.* Professor WHEELER and Mr. PICKETT.

Physics

Elementary Physics (Physics A): the fundamental facts of Physics are studied with some special reference to heat and electricity. Text-book, lectures, and laboratory work. First year. *Both terms, three hours.* Mr. CHRISLER.

Certificates of Physics work done elsewhere than in a college of approved standing will not be accepted in lieu of this course.

OPTIONAL COURSES

The following courses are not required of students in Pharmacy, but may be elected profitably.

Zoology

1-2. Elements of Zoology: an introductory course giving an outline of the classification and structure of animals, fundamentals of histology, embryology, and physiology, with some consideration of biological theories; lectures with laboratory work. Text: Parker. *Both terms, three hours.* Professor WILSON and Mr. GEORGE.

Botany

2. Introduction to Systematic Botany: with special attention to medical plants; laboratory and field work, with recitations. *Spring term, three hours.* Professor COKER and Mr. TOTTEN.

3-4. Physiology: a general course in plant physiology; lectures with laboratory and field experiments. Junior and Senior elective. *Both terms, three hours.* Professor COKER and Mr. TOTTEN.

Chemistry

11-12. Industrial Chemistry: lectures; the application of chemistry to the arts and industries. This course includes metal-

lurgy, glass making, pottery, (*fall term*); food, clothing, building materials, explosives, photography, etc., (*spring term*). *Both terms, three hours.* Professor HERTY.

41-42. Quantitative Analysis: laboratory work. This course is intended to give the student a thorough grounding in analytical methods and manipulations. *Three hours.* Professor BELL.

49-24. Quantitative Analysis: laboratory work. The student in this course is led further into the study and practice of analytical methods. The work may take any special direction desired by him, fitting him to be an agricultural chemist, iron chemist, manufacturing chemist, physician, druggist, or teacher of chemistry. The spring term is given to research. *Five hours.* Professor HERTY.

Geology

1-2. Determinative Mineralogy: lectures with laboratory work. Dana's *Text-Book of Mineralogy*. *Both terms, two hours.* Mr. SMITH.

Students in Pharmacy have also the privilege of attending any of the regular academic courses.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHARMACY (P. D.)

Responding to the need for more advanced education in pharmacy, owing to the rapid progress made in the sciences and arts directly affecting the profession, and owing to the widely diversified knowledge now required to keep the pharmacist in touch with the best results of modern research, the University School of Pharmacy has added a third year to its curriculum and grants upon the satisfactory completion of the course the degree of Doctor of Pharmacy (P. D.).

The subjects in the first and second years of this course coincide with those prescribed for the degree of Graduate in Pharmacy (Ph. G.). The third year's work is outlined below.

Every person upon whom the degree of Doctor of Pharmacy shall be conferred must have completed the courses of study as outlined. The course extends over three sessions of nine months each. The student must have completed the work of the three sessions in the School of Pharmacy of this University, or of the

third session here after having satisfactorily completed two years' work in some college of pharmacy recognized by the University. He must obtain satisfactory marking in attendance, making a general average of 70 per cent in the various branches, and submit a satisfactory thesis. The thesis must be an original essay embodying the results of the student's personal research in some branch of Pharmacy, which he has prosecuted under the direction of the professor who assigned him the subject. The subject of such thesis must be announced on or before February 1 to the Dean of the Faculty. On May 2 the thesis shall be read before the Dean of the School, subject to criticism and correction. The corrected and approved thesis must be handed to the Registrar in typewritten form on or before May 15. It will be published at the discretion of the Dean of the School. The student must have had a practical experience of at least four years with some qualified pharmacist in a dispensing store. Satisfactory evidence on this point must be submitted to the Dean of the School, and a certificate deposited with the Registrar on or before May 15. Students who have not had the full four years' experience will be permitted to stand examinations for graduation; but their diplomas will be withheld until they shall have satisfied this requirement. Of the three years of experience required for license by the State Board of Pharmacy, the work done in the Pharmaceutical laboratory will count for only one.

THIRD YEAR

- Pharmacy 3 (2)
- Pharmacy 7 (5)
- Physiology (3)
- Bacteriology (9)
- Chemistry 11-12 (3)
- Chemistry 41-42 (3)
- Chemistry 61-62 (3)
- Chemistry 63-64 (2)

Pharmacy

3. Commercial Pharmacy. The need for commercial training in the practice of pharmacy is now thoroughly understood by every one. The School of Pharmacy has instituted a course in commercial pharmacy that is required of third year students and is an elective for first and second year students. The fall term

is devoted to the preliminary problems concerned in starting a drug business and getting it established upon a firm basis. Advertising and salesmanship are discussed at length. A series of eight lectures on the laws regulating the practice of pharmacy, sale of poisons, insurance, negotiable instruments, partnerships, and corporations will be given the students of this course by the Dean and Professors of the University School of Law.

The spring term is devoted to business arithmetic and correspondence and bookkeeping. Text-book: O'Connor's *Commercial Pharmacy*. Third year. *Both terms, two hours*. Assistant Professor BEARD.

7. Manufacturing Pharmacy. This course for third year students will consist of lectures, supplemented by laboratory work. The preparation of pharmaceutical products on a commercial scale will be given much consideration, as will the economics of manufacturing. The student will be acquainted with the sources, importation, and market prices of those agents which enter into remedies and pharmaceuticals. *Both terms, five hours*. Professor HOWELL.

Chemistry

11-12. Industrial Chemistry: the methods and economics of chemical industries, with special references to those industries utilizing the products of the Southern States. Prerequisite Chemistry 1-2. *Both terms, three hours*. Professor HERTY.

41-42. Quantitative Analysis: laboratory work, lectures, and stoichiometric exercises; a grounding in analytical methods. Junior and Senior elective; prerequisite, Chemistry 1-2 and 31-32 or may be taken with 31-32. *Both terms, three hours*. Professor BELL.

Laboratory fee, \$7.50 a term.

61-62. Organic Chemistry: Junior and Senior elective; prerequisite, Chemistry 1-2 and 31-32. *Both terms, three hours*. Professor WHEELER.

Laboratory fee, \$4.00 a term.

63-64. Organic Chemistry: laboratory work including analysis of (a) pure organic compounds, (b) food products, (c)

commercial dyestuffs. Prerequisite Chemistry 61-62. *Both terms, two hours.* Professor WHEELER.

Laboratory fee, \$6.00 a term.

Bacteriology

Professor MACNIDER and Mr. GREENWOOD.

The student learns by practical experience the methods of cultivating, staining, and identifying the principal pathogenic bacteria. A few non-pathogenic and saprophytic forms are studied. The pathological significance of the various forms is explained by lectures, and the pathogenicity of some of the forms is determined by inoculation experiments performed by the class. At intervals during the course unknown organisms are given for identification. In addition to this, each student is required to isolate from the air, water, fecal matter, or pus two organisms and determine their species. The latter part of the course is devoted to the bacteriological study of milk and water. Text: Jordan. Reference: Park and McFarland.

PHARMACEUTICAL LABORATORY

EDWARD VERNON HOWELL, A. B., Ph. G., DIRECTOR and *Professor of Pharmacy.*

JOHN GROVER BEARD, Ph. G., *Assistant Professor of Pharmacy.*

RICHARD HOMER ANDREWS, Ph. G., *Assistant in the Laboratory.*

WILSON WILLIAM ALLEN, *Assistant in the Laboratory.*

Person Hall is occupied by the Department of Pharmacy. It contains ten rooms, each one of which is equipped with water, gas, and electricity. It is well supplied with large, high windows and heated from the central heating plant.

The front part of the building contains a lecture room, a library, and a research laboratory. The lecture room has a seating capacity of seventy-five students. In this room are exhibited many rare and expensive chemicals, anti-toxins and serums, standardized galenicals, and preparations made by various students. These exhibits serve to illustrate lectures. The library was inaugurated by the class of 1897. In it are filed a large number of medical and pharmaceutical journals, and it contains a well selected group of text, historical, and reference books. A re-

search laboratory composes the remaining part of the front wing.

The body of the building is made up of three laboratories and an office. These laboratories are for the first, second, and third year pharmacy students. Each student is supplied with an individual desk with lock, in which is stored all the equipment and apparatus necessary for the work. These desks are supplied with both water and gas. Suitable balances are distributed, at convenient points, throughout the laboratories.

The back wing of the building contains a prescription and gas room and a large lecture room for the courses in materia medica and botany.

OTHER LABORATORIES

The laboratories of Physics, Chemistry, Biology, and Medicine are open to students in Pharmacy. These laboratories are all equipped with the most approved apparatus for experimentation and illustration.

In addition to these advantages, students of this department enjoy the privileges of the University reading room, in which are filed all the leading newspapers and magazines, and free access to the University Library, which numbers sixty-seven thousand volumes and eighteen thousand pamphlets.

THE DEGREE OF PHARMACEUTICAL CHEMIST

To students who have not served an apprenticeship in a drug store but who desire to become manufacturing pharmaceutical chemists, food and drug inspectors, naval pharmacists, or teachers, the University School of Pharmacy will, upon the satisfactory completion of the studies and conditions required, grant the degree of Pharmaceutical Chemist (Ph. C.). These studies and conditions are identical with those prescribed for the degree of Doctor of Pharmacy (P. D.), except that no practical experience in a drug store is necessary.

9. Pharmacy for Medical Students. This course in pharmacy will consist of two lectures supplemented by two laboratory periods each week. Beginning with a consideration of the metric system as applied to writing prescriptions and preparing formulæ, the course will embrace successively medical arithmetic, prescription writing, official galenical and magistral preparations

with their doses, cellulose and its compounds, carbohydrates, coal and wood tar products, resins, gums, esters, volatile oils, alkaloids, animal drugs, and lastly solubility and incompatibility. The student will be required to make the preparations commonly prescribed, in order that he may be acquainted with their nature and composition. In addition he must demonstrate the various forms of incompatibility liable to occur in prescriptions. Text book: DeLorme's *Manual of Pharmacy for Physicians*. *First year. Spring term, six hours.* Assistant Professor BEARD, and Mr. ALLEN.

ADMISSION OF WOMEN

The profession of pharmacy offers inducements to well-educated, energetic young women. The University Pharmacy School is open to women, who can enter under the same conditions and with the same privileges as men.

WILLIAM SIMPSON PHARMACEUTICAL SOCIETY

This Society was inaugurated by the class of 1913. It is named in honor of the late William Simpson of Raleigh, a pioneer druggist and teacher.

The Society holds weekly meetings. At these meetings, papers are read by the various student members and discussions of the papers follow. At stated intervals, debates are held on subjects of particular interest to pharmacists.

The officers of the Society for the present year are: W. H. Allen, President; R. H. Andrews, Vice-President; A. L. Fishel, Secretary; J. L. Henderson, Treasurer.

SCHEDULE OF RECITATIONS

FIRST YEAR

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:30	Pharm. 8		Pharm. 8		Pharm. 8	
9:45		Botany		Botany		Quiz
10:40	Pharm. 1	Pharm. 1	Pharm. 1	Pharm. 1	Pharm. 1	
11:35		Chem. 1-2		Chem. 1-2		Chem. 1-2
12:30						
2:30	Pharm. 4				Pharm. 4	

SECOND YEAR

8:30		Mat. Med.		Mat. Med.		
9:45		Pharm. 2		Pharm. 2		
10:40		Pharm. 6	Physiology	Pharm. 6		
11:35	Pharm. 2	Physiology	Pharm. 2	Physiology	Pharm. 2	
12:30						
2:30	Chem. 74 Pharm. 5	Chem. 31-32	Chem. 74 Pharm. 5	Chem. 31-32	Pharm. 5	

THIRD YEAR

8:30						Chem. 5
8:45	Chem. 11-12	Chem. 61-62	Chem. 11-12	Chem. 61-62	Chem. 11-12	
10:40		Bacteriology	Physiology	Bacteriology		Bacteriology
11:35	Commercial Pharmacy	Chem. 63-64 Physiology	Bacteriology	Chem. 63-64 Physiology	Commercial Pharmacy	Bacteriology
12:30	Pharm. 7		Pharm. 7		Pharm. 7	
2:30	Chem. 41-42	Bacteriology	Chem. 41-42	Bacteriology	Chem. 41-42	Pharm. 7

THE SUMMER SCHOOL

FACULTY AND OFFICERS (1914)

EDWARD KIDDER GRAHAM, A. M., D. C. L., LL. D., PRESIDENT.

NATHAN WILSON WALKER, A. B., DIRECTOR.

OSCAR LEACH, A. B., SECRETARY.

WALTER DALLAM TOY, A. M., *Professor of Germanic Languages and Literatures.*

COLLIER COBB, A. M., *Professor of Geology and Mineralogy.*

GEORGE HOWE, Ph. D., *Professor of the Latin Language and Literature.*

NATHAN WILSON WALKER, A. M., *Professor of Secondary Education.*

WILLIAM CHAMBERS COKER, Ph. D., *Professor of Botany.*

ANDREW HENRY PATTERSON, A. M., *Professor of Physics.*

MARVIN HENDRIX STACY, A. M., *Professor of Civil Engineering.*

CHARLES WESLEY BAIN, M. A., *Professor of Greek.*

HARRY WOODBURN CHASE, Ph. D., *Professor of Psychology.*

LOUIS ROUND WILSON, Ph. D., *Professor of Library Administration.*

JAMES MUNSIE BELL, Ph. D., *Professor of Physical Chemistry.*

LESTER ALONZO WILLIAMS, Ph. D., *Professor of School Administration.*

THOMAS JAMES WILSON, JR., Ph. D., *Associate Professor of Latin.*

WILLIAM STANLY BERNARD, A. M., *Associate Professor of Greek.*

JOHN MANNING BOOKER, Ph. D., *Associate Professor of English.*

GEORGE KENNETH GRANT HENRY, Ph. D., *Assistant Professor of Latin.*

VIVIAN LEROY CHRISLER, A. M., *Instructor in Physics.*

JOHN ELIPHALET SMITH, M. S., *Instructor in Geology.*

MARY GREGORY HUME, *Professor of French, Woman's College, Richmond, Va.*

GUSTAV HAGEDORN, *Dean of the School of Music, Meredith College.*

ELIZABETH BURTT HAGEDORN, *Professor of Piano, Meredith College.*

JAMES BOYD KENNEDY, Ph. D., *Professor of History and Economics, Presbyterian College of South Carolina.*

ERNEST L. STARR, A. B., *Professor of English, Salem College.*

H. B. MARROW, A. B., *Principal Chapel Hill High School.*

SAMUEL LLOYD SHEEP, M. E., *Superintendent Elizabeth City Graded Schools.*

MARY OWEN GRAHAM, *Assistant Superintendent of Public Instruction for Mecklenburg County.*

J. E. TURLINGTON, Ph. D., *Superintendent Craven County Farm-Life School.*

EDWIN DAVIS PUSEY, A. M., *Superintendent Goldsboro Public Schools.*

ISAAC CEBERN GRIFFIN, *Superintendent Marion Graded Schools.*

LILY NELSON JONES, *Supervisor of Writing in Durham City Schools.*

BESSIE WHITTED SPENCE, A. M., *Teacher and Supervisor of Drawing.*

AUGUSTA NORFLEET MICHAELS, *Assistant Teacher and Supervisor of Drawing.*

MRS. JOHN S. CUNNINGHAM, *Teacher of Domestic Science.*

HESTER C. STRUTHERS, *Assistant Principal Chadbourn High School.*

HENRIETTE MARIE MASSEING, *Story Teller in Children's Department of Atlanta Carnegie Library.*

ROSE KEE, A. B., *Principal and Supervisor of Primary Department Elizabeth City Graded School.*

SPECIAL LECTURERS

MARCUS CICERO STEPHENS NOBLE, *Professor of Pedagogy.*

JOSEPH HYDE PRATT, Ph. D., *Professor of Economic Geology.*

ROBERT DIGGS WIMBERLY CONNOR, Ph. B. *Secretary of the North Carolina Historical Commission.*

RABBI ALEXANDER LYONS, Ph. D., *of Brooklyn, N. Y.*

LAUTRAC CRANMER BROGDEN, A. M., *State Supervisor of Rural Elementary Schools.*

EUGENE CUNNINGHAM BRANSON, A. M., *Professor of Rural Economics.*

COLLIER COBB, A. M., *Professor of Geology.*

ERNEST L. STARR, *Professor of English, Salem College*

H. Q. ALEXANDER, *of the Farmers' Union.*

W. J. BATTLE, Ph. D., *Dean of the University of Texas.*

J. S. HOLMES, *State Forester.*

KEMP PLUMMER BATTLE, A. M., LL. D., *Former President of the University.*

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., *Professor of Chemistry.*

LIBERTY HYDE BAILEY, Ph. D., *Professor of Agriculture, Cornell University.*

ANDREW HENRY PATTERSON, A. M., *Professor of Physics.*

JOHN MANNING BOOKER, Ph. D., *Associate Professor of English.*

COURSES OF INSTRUCTION

ENGLISH

s 1. Grammar and Composition. A study of the principles of grammar and composition. Text-book assignments, themes, lectures. Text-book; Robbins and Rowe's *Grammar and Composition*. *Five hours a week*. 5:30. Mr. STARR.

s 2. Literature in the Grades. It is the purpose of this course to indicate materials and methods of teaching literature in the grades, and in developing a taste for good literature. Poetry and prose stories suited to each grade from the first to the eighth will be discussed, and each student will be required to prepare for and present at least one poem and one story. *Five hours a week*.

This course was not given in 1914.

s 3. The Study of Literature. A consideration through class discussion and lectures of the meaning and methods of the study of literature. This course will be based on certain of the pieces of literature required for college entrance. *Five hours a week*. 12:30. Mr. STARR.

s 4. Composition. Discussion of the principles of composition, and practice in composition. Text-book: *English Composition: in Theory and Practice*, by Canby and others. *Five hours a week*. Mr. BERNARD.

s 5. Nineteenth Century Poetry. The Romantic and Victorian Poets,—especially Wordsworth, Shelley, Byron, Tennyson, and Browning,—will be studied in relation to the different social, religious, and artistic movements of their times and in the light of contemporary criticism. From each of those who desire this course to count towards the Master's degree a thesis will be required. *Ten hours a week*. Credits, 2 hours. 11:35, 12:30. Mr. BOOKER.

HISTORY

s 1. The History of England. Lectures and assigned readings. Text-book: Walker's *Essentials of English History*. *Five hours a week*. 9:45. Mr. KENNEDY.

s 2. The History of the United States. Lectures and assigned readings. Text-book: Hart's *Essentials in American History*. *Five hours a week*. 11:35. Mr. KENNEDY.

s 3. North Carolina History. A review course on the leading events in the history of the State, with special emphasis upon the social, economic, and political development of the people. Lectures and reference reading. (a) During the first two weeks this course will deal with certain prominent features of the colonial history of the State, and will be conducted by Mr. Noble. (b) During the second two weeks the course will deal with the racial elements of our State history, and will be conducted by Mr. Connor. (c) During the last two weeks it will deal with the modern industrial development of the State, and will be conducted by Mr. Pratt. *Five hours a week*. 5:30.

s 4. General History. A general course dealing with the social and political aspects of Greek and Roman civilization. Contrasts and comparisons between Ancient Greek and Roman Governments and Modern Democracies will receive especial attention. Lectures, text-books, and readings. Text-book: Myers' *General History*. *Five hours a week*. 2:30. Mr. PUSEY.

s 5. History of Greece. A course in Greek History from the beginning through the Macedonian period, dealing with the social, political and economic problems of Greek civilization. Lectures and assigned readings with constant reference to original sources. Text-book: Bury's *History of Greece* (1 vol. edition.) *Five hours a week*. Credit, 1 hour. 10:40. Mr. BAIN.

s 6. History of Rome. A course in Roman History from the beginning through the Republican period, dealing with the social, political and economic problems of Roman civilization. Lectures and assigned readings with constant reference to original sources. Text-book: How and Leigh's *History of Rome*. *Five hours a week*. Credit, 1 hour. 9:45. Mr. BAIN.

NOTE.—Courses s 5 and s 6 alternate. Course s 5 will not be given in 1914 unless applied for in advance by as many as six students.

LATIN

s 1. Elementary Course. Pronunciation, inflection, syntax of nouns and verbs; special study of the subjunctive, indirect discourse, relative and conditional sentences. Text-book: Bennett's *Latin Grammar*. *Five hours a week*. 8:30. Mr. HOWE.

s 2. Cæsar. A course in the first four books of the Gallic War; translation and exercises in syntax; special attention to methods of presenting the material to high school pupils. Text-book: any standard text of the Gallic War. *Three hours a week*. Mr. HENRY.

This course alternates with course s 3; to be omitted in 1914.

s 3. Cicero. A course in the four orations against Catiline; translation and exercises in syntax; special attention to methods of presenting the material to high school pupils. Text-book: any standard text of the *Orations against Catiline*. *Three hours a week*. 10:40 MWF. Mr. HENRY.

This course alternates with course s 2; to be given in 1914.

s 4. Vergil. A course in the first six books of the *Aeneid*; translation, syntax, meter; special attention to methods of presenting the material to high school pupils. Text-book: any standard text of the *Aeneid*. *Five hours a week*. 12:30. Mr. T. J. WILSON.

s 5. Latin Composition. Preparation of Latin exercises and discussion of problems of vocabulary, word order, and syntax. *Three hours a week*. 10:40 TTS. Mr. HENRY.

s 6. Horace. Reading of selected Odes, with some account of the life and times of the author. Text-book: any complete edition of the *Odes*. *Five hours a week*. Credit, 1 hour. Mr. HOWE.

To be omitted in 1914.

s 7. Pliny. Reading of selected letters; a study of the epistle as a literary form. Outside readings will be assigned on the literature of the first century, with special emphasis on the work of Pliny's contemporaries. Text-book: Westcott's *Selections from Pliny's Letters*. Credit, 1 hour. *Five hours a week*. Mr. HOWE.

s 8. Vergil. An advanced course in the life and works of Vergil. Outside readings will be assigned on the epic and the pastoral in Latin poetry. Credit, 1 hour. *Five hours a week.* 10:40. Mr. HOWE.

GREEK

s 1. Elementary Greek. A course for teachers and those beginning the study of Greek. Special emphasis upon methods of teaching. Text-book: Moss's *First Greek Reader* and Babbitt's *Greek Grammar*. *Five hours a week.* 11:35. Mr. BAIN.

s 2. Xenophon. Xenophon's *Anabasis* I-IV. Translation and syntax. Especial attention to sight-reading. Text-book: Goodwin and White's *Xenophon's Anabasis* and Babbitt's *Greek Grammar*. *Five hours a week.* 12:30. Mr. BAIN, Mr. WILSON or Mr. BERNARD.

s 3. Greek Literature. Lectures on the origin and development of Greek Literature with a careful study of selected poems and assigned readings. Text-book: Wright's *Masterpieces of Greek Literature*. No knowledge of Greek is required for this course. *Five hours a week.* 8:30. Credit, 1 hour. Mr. BAIN.

NOTE—Courses s 2 and s 3 will not be given unless applied for in advance by as many as six students.

FRENCH

s 1. Elementary Course. Grammar. Oral and written exercises. Pronunciation especially emphasized. Elementary conversation. Text-book: Lazare's *Lectures Faciles*; Chardenal's *French Grammar*. *Five hours a week.* 11:35. Miss HUME.

s 2. Advanced Course. Rapid review of grammar. Reading of French authors. For students who have at least one year of French. *Five hours a week.* 12:30. Miss HUME.

GERMAN

s 1. Elementary Course. This course is intended for those who have no previous acquaintance with the language and for those who are interested in the methods of teaching beginners. There will be constant oral practice, and the principles of correct pronunciation will be explained and exemplified in the daily use

of the language. The class will learn the inflections, the most common laws of syntax, and will read as widely as possible in simple German prose. The principles of good translation will be illustrated. Translation from English into German will be used to insure an accurate acquaintance with the facts of the language. Text-book: Mosher's *Lern-und Lesebuch*; Holzwarth's *Gruss aus Deutschland*. Five hours a week. 9:45. Mr. TOY.

s 2. Advanced Course. This course presupposes one year's study of German. There will be a review of important points of grammar, but attention will be directed chiefly to wide reading. It is hoped that this course will enable students to lay a good foundation for more advanced work in the language. Colloquial exercises will be given in connection with composition. Text-books: Allen's *First German Composition*; Schiller's *Der Geisterseher*. Five hours a week. 11:35. Mr. TOY.

s 3. Introduction to the History of German Literature. This course is an introduction to the classical literature of Germany in the last quarter of the 18th century. A brief outline of the development of German literature will be given in lectures. Goethe's life and certain epochs of history will be discussed in order to assist in the interpretation of Goethe's works. The principles of correct interpretation will be exemplified by a critical study of the *Iphigenie auf Tauris*. This course may be elected by those who have had two years of German. It may be counted as work toward the Master's degree. Text-book: Goethe's *Iphigenie auf Tauris*. Lectures and collateral readings. Five hours a week. 10:40. Credit, 1 hour. Mr. TOY.

MATHEMATICS

s 1. Arithmetic. Lectures and assigned work, including the fundamental operations, fractions, percentage, interest, ratio, and proportion, mensuration, etc. Text-book: Milne's *Progressive Arithmetic, Book III*. Five Hours a week. 8:30. Mr. SHEEP.

s 2. Secondary Algebra. Lectures and assigned work including factoring, simultaneous equations, exponents, involution and evolution, quadratic equations, the binomial theorem, etc. Text-book: Milne's *Standard Algebra*. Five hours a week. 9:45. Mr. HENRY.

s 3. Plane Geometry. Lectures and recitations. Text-book: Well's *Essentials of Plane and Solid Geometry*. Five hours a week. 2:30. Mr. MARROW.

s 4. Solid Geometry. Lectures and recitations. Special attention given to the solution of original exercises. Text-book: Wells' *Essentials of Plane and Solid Geometry*. Five hours a week. 3:30. Mr. SHEEP.

s 5. and s 6. Algebra. From quadratics through the theory of equations (Fine's *College Algebra*). These two courses constitute the fall term of Mathematics 1, as outlined in the general catalogue, and cover two summer terms. No University credit will be given until both terms are completed. Five hours a week. Credit, 2 hours. 8:30. Mr. STACY.

(s 6 will not be given in 1914.)

s 7 and s 8. Plane and Spherical Trigonometry and Logarithms. Rothrock's *Plane and Spherical Trigonometry*. These two courses constitute the equivalent of the spring term of Mathematics 1, as outlined in the general catalogue, and cover two summer terms. No University credit will be given until both terms are completed. Five hours a week. Credit, 2 hours. 9:45. Mr. STACY.

(s 8 will not be given in 1914.)

PHYSICS

s 1. Elementary Course. Mechanics of solids, liquids and gases; sound. Five recitations and five laboratory periods a week. In this and the following courses Millikan and Gale's *First Course in Physics* is used as a text-book. This course is the equivalent of the Fall Term of Physics A as scheduled in the general catalogue. 8:30. Mr. PATTERSON and Mr. CHRISLER.

s 2. Elementary Course. Magnetism and electricity; heat and light. Five recitations and five laboratory periods per week. This course is the equivalent of the spring term of Physics A as scheduled in the general catalogue. 12:30. Mr. PATTERSON and Mr. CHRISLER.

NOTE.—These two courses may be taken together, and when completed satisfactorily will count as University entrance requirement in Physics. A fee of \$1.00 will be charged in each course if laboratory work is taken.

s 3. Advanced Course. Mechanics of solids, liquids and gases, as presented in Carhart's *College Physics*. Five lectures and five laboratory periods a week. This course is the equivalent of the Fall Term of Physics 1 as scheduled in the general catalogue. Credit, $1\frac{1}{2}$ hours. 10:40. Mr. PATTERSON and Mr. CHRISLER.

s 4. Advanced Course. Sound; light; heat; electricity and magnetism. A continuation of course 3. Five lectures and five laboratory periods a week. This course is the equivalent of the Spring Term of Physics 1 as scheduled in the general catalogue. Credit, $1\frac{1}{2}$ hours. Mr. PATTERSON and Mr. CHRISLER.

(Not offered in the summer school of 1914.)

NOTE.—A fee of \$1.50 will be charged in each course if laboratory work is taken.

CHEMISTRY

s 1. General Descriptive Chemistry. A study of the non-metallic elements and their compounds. Daily lectures. Laboratory work, 2 hours, on alternate days. Weekly quiz. Credit, $1\frac{1}{2}$ hours. Mr. BELL.

Laboratory fee, \$2.00.

s 2. General Descriptive Chemistry. A study of the metals and their compounds, and an introduction to the study of Organic Chemistry. Daily lectures. Laboratory work, 2 hours, on alternate days. Weekly quiz. Credit, $1\frac{1}{2}$ hours. Mr. BELL and Assistant.

Laboratory fee, \$2.00.

NOTE.—These two courses combined constitute the equivalent of course 1 as scheduled in the general catalogue. University credit will be withheld until both these courses are completed, either in the regular course or in the Summer School.

s 3. Qualitative Analysis. Laboratory work with lectures. Prerequisite, all of General Descriptive Chemistry. *Two hours daily*. Credit, 1 hour. Mr. BELL.

Laboratory fee, \$5.00.

s 4. Qualitative Analysis. Laboratory work with lectures. Continuation of above course. *Two hours daily*. Credit, 1 hour. Mr. BELL.

NOTE.—These two courses combined constitute the equivalent of course 3 as scheduled in the general catalogue. University credit will be withheld until both these courses are completed, either in regular course or in Summer School.

s 5. Quantitative Analysis. Laboratory work with lectures and stoichiometric exercises. Prerequisite, all of General Descriptive Chemistry, and Qualitative Analysis. Qualitative Analysis and Quantitative Analysis may be taken together. Three hours daily. Credit, $1\frac{1}{2}$ hours. Mr. BELL and Assistant.

Laboratory fee, \$5.00.

s 6. Quantitative Analysis. Laboratory work with lectures and stoichiometric exercises. Continuation of above course. Three hours daily. Credit, $1\frac{1}{2}$ hours. Mr. BELL and Assistant.

NOTE.—Courses s 5 and s 6 combined constitute the equivalent of course 4 as scheduled in the general catalogue. University credit will be withheld until both these courses are completed, either in the regular course or in the Summer School.

NOTE.—Any course in Chemistry not applied for in advance by as many as six students may be omitted in 1914.

BOTANY

s 1. Field and Economic Botany. It will be the object of this course to give an introduction to the trees, commoner flowers and weeds of Chapel Hill and incidentally to furnish a drill in the use of manuals so that the student may be able to determine later the names of plants of his own neighborhood. Attention will be given also to economic and ornamental plants as opportunity offers. The arboretum and Glen Burnie Farm will offer exceptional opportunities for this work. The class will meet out of doors whenever the weather permits. There will be a few hours of laboratory work with the microscope and hand lens. Text-book: Gray's *Manual of Botany* (Seventh edition). Two hours daily. *Ten hours a week.* 9:45. Mr. COKER.

AGRICULTURE AND NATURE STUDY

s 1. Elementary Agriculture. The course is designed to meet the needs of teachers teaching Agriculture in the sixth to tenth grades. The subject matter will be so presented that the

student with little knowledge of the science of farming may be able to correlate practical Agriculture with Arithmetic and other subjects. On laboratory periods farms will be visited and a study made of the growing crops; the effects of stand on yield; effect of cultivation, fertilization, water, and vegetable matter on soils and crops. Four lectures and one laboratory period a week. 11:35. Mr. TURLINGTON.

s 2. Nature Study and School Gardening. A study of seeds, germination, food assimilation, growth and the function of plant parts will be made; together with the methods of conducting school garden and of beautifying school grounds. On laboratory periods visits will be made to the woods, gardens, and country school houses, if possible; germination test will also be made. Four lectures and one laboratory period per week. 3:30. Mr. TURLINGTON.

s 3. Agriculture; mainly farm arithmetic. Thirteen meetings. Mr. TURLINGTON.

GEOLOGY AND GEOGRAPHY

s 1. General Geography. A course dealing with home geography and the geography of North Carolina; with general principles and their application. Attention will be given to the adaptation of subject matter to the grades, to methods of teaching, and to supplementary work. Dodge's *Comparative Geography* will be used as a guide. *Five hours a week.* 9:45. Mr. SMITH.

Laboratory fee, \$5.00.

s 2. Geography for Secondary Schools. The class will make a general study of topographic forms and their influence on human affairs, also of the natural provinces of the United States and of North Carolina. The historical, commercial, industrial, and agricultural phases of the subject will be emphasized. This course includes a study of laboratory equipment and of field and laboratory methods of instruction. Text-book: *The Elements of Geography*, by Salisbury, Barrows and Tower. *Five hours a week.* 3:30. Mr. SMITH.

Laboratory fee, \$5.00.

NOTE.—The classes in geography will make numerous field excursions and several industrial trips to mills and factories.

s 3. Elementary Geology. Materials of the earth and the agencies affecting them; processes and their results as a key to the interpretation of the earth's history, with special reference to that of North Carolina. The origin, classification, conservation, and uses of the economic minerals, rocks, soils, etc., of the State and their importance to man. Field and laboratory work. Text-book: *The Elements of Geology*, Blackwelder and Barrows. *Five hours a week*. Credit, 1 hour. 11:35. Mr. SMITH.

Laboratory fee, \$1.00.

NOTE.—This course may not be given in 1914, if not applied for in advance by as many as six students.

Geology 13. Advanced Geological Field Work and Special Research. A study of the etched peneplain of middle North Carolina in its relation to the economic and historical geography of the state, with special reference to problems of transportation from colonial days to the present. The course covers five weeks, of which one is spent in Chapel Hill with daily meetings, the remaining four weeks being devoted to field study. This course was arranged in 1905 in co-operation with several universities in different parts of the United States, all of them giving credit for work done in it. *One term, three hours, or an hour and a half for a whole year*. Mr. COBB.

Students contemplating taking this course should address Professor Collier Cobb, Chapel Hill, N. C., before June 6.

EDUCATION

s 1. Primary School Methods. Model lessons for beginners. Model Class work, lectures, and assigned readings. Work with children just beginning school. A class of primary grade children will be organized for the purpose of this course. Lessons in phonics, reading, language work, numbers, nature study, etc., covering the general work of the first grade. Observation and practice teaching in the Practice School. This course will be given in two sections: I, 8:30; II, 10:40. Each division, *Five hours a week*. Miss GRAHAM. Section III, Howell Primer Class, Miss KEY.

s 2. Primary School Methods. Methods and model lessons suitable for grades 2 and 3. Work based upon the State-adopted

Course of Study. Special attention given to reading and language. Observation and practice teaching in the Practice School. State-adopted text-books will be used. *Five hours a week.* 8:30. Mr. GRIFFIN.

s 3. The Theory and Practice of Teaching. Lectures and assigned readings. Methods and model lessons for grades 4-7. Work based upon the State-adopted Course of Study. Special attention given to English, geography, history, and arithmetic. Lectures and discussions, covering some of the problems in school-room management, promotions, the recitation, etc. Observation and practice teaching in the Practice School. This course will be based on O'Shea's *Everyday Problems in Teaching*. *Five hours a week.* 12:30. Mr. GRIFFIN.

s 4. Grammar School Methods. The course embraces a discussion of each type of pupil found in the public schools, the defining of the problem "what to do with each type found," method of testing for mental ability, methods of testing for ability to apply things learned, a means of preventing repeating, individual promotion, and the value of continuous individual records. *Five hours a week.* 10:40. Mr. PUSEY.

s 5. Plays and Games. The course embraces a study of children's representative plays, folk games, gymnastic and ball games and simple dance forms. It takes up the selection of games for school and play ground and the adaptation of school room gymnastics. Classification of games according to age and grade of children. It includes work in both theory and practice. *Five hours a week.* 5:30. Miss MASSELING.

s 6. Story Telling. Lectures on the art of story telling, origin and history of story telling, use of the story in education. Selection and adaptation of stories and correlation with regular work of class. A study of fairy and folk-lore, mythological tales, nature stories, Bible stories, the great national epics and their uses, and the arranging of programs, of miscellaneous stories. The educative value of dramatizing the story in the school. Suggested lists of stories. Practice in adapting and telling stories. *Five hours a week.* 2:30. Miss MASSELING.

NOTE.—An informal gathering for the purpose of playing games and

telling stories will be held at twilight. The leader will tell stories assisted by the members of the class. These twilight meetings are open to all who care to attend, whether members of the class or not.

s 7. Class Management. The work will be conducted with the high school classroom in mind. Emphasis will be laid on classroom routine; discipline; hygiene of the classroom; decoration; daily programmes; attention in the classroom; individual and group methods of classroom instruction. Special emphasis will be laid on the formation of correct classroom habits in the matters of conduct, study, thought and expression. Lectures, parallel readings, discussions. *Three hours a week.* 11:35. Mr. WILLIAMS.

s 8. High School Administration. A study of the rise of the high school; its legitimate place in our school system; its size as affecting its organization and management; evaluation of the program of studies; necessary equipment; the teaching force; characteristics of the high school pupils. Brown's *American High School*, lectures, parallel readings. *Five hours a week.* Credit, 1 hour. 9:45. Mr. WILLIAMS.

s 9. Psychology. The study of psychology with educational applications, using Pillsbury's *Essentials of Psychology* and Colvin's *The Learning Process*, with parallel readings. Special attention will be given to such topics as habit formation, learning and memory, the instincts and their educational values, etc. The aim will be to give a systematic basis for the consideration of psychological problems which arise in teaching. *Two hours daily. Ten hours a week.* Credit, 2 hours. 8:30, 9:45. Mr. CHASE.

s 10. Experimental Education. A study of definite educational problems of a psychological nature, such as formal training, individual development and differences, mental tests, psychological scales for the measurements of the efficiency of instruction, etc. Each member of the class will be assigned a definite problem, and the various lines of work will be brought together in discussions and lectures. This course presupposes some psychological training, and should be elected only after conference with the instructor. *Five hours a week.* Credit, 1 hour. 12:30. Mr. CHASE.

s 11. Supervision. This course will briefly cover the history of supervision in North Carolina; the distinction between supervisory and administrative duties; the duties and relations of the different supervisory officers; methods of supervision in county and city districts; special emphasis on ways to study supervisory problems. Lectures, parallel readings, statistics. *Five hours a week.* Credit, 1 hour. 10:40. Mr. WILLIAMS.

LIBRARY SCIENCE

s 1. Library Organization and Methods. An elementary course in the organization and management of school, college, and public libraries. (a) General lectures on the place of the library in the school and community; children's reading; book selection and buying; reference work with pupils in the high school and grades; declaiming, essay writing, and debating. (b) Technical lectures on the care of books; accession records; classification and book numbers; cataloguing, changing systems, binding and mending books; care of periodicals and pamphlets. (c) Practice in the University Library. (d) Assigned readings. *Five hours a week.* 11:35. Mr. WILSON.

s 2. Bibliography. An advanced course treating of the use of dictionary card catalogues, indexes, dictionaries, encyclopedias, atlases, gazeteers, almanacs, year books, government documents and document indexes, publishers' catalogues, and general bibliography. Extended practice in the finding of material for orations, theses, debates, and special studies will be required together with practice at the reference desk in the University Library. An extensive bibliography on some subject to be assigned will also be required upon the completion of the course. Lectures, assigned readings, text-books. *Five hours a week.* Credit, 1 hour. 12:30. Mr. WILSON.

DRAWING

The course will be planned with a view to giving teachers instruction that will give the knowledge necessary to the teaching of school art in rural and city schools. Plans by which the acquired knowledge can be adapted to the needs of different grades, and methods of presenting lessons in each grade will be carefully discussed and taught. The State-adopted course in drawing will

be the basis of instruction, though the work will not be confined wholly to this.

The classes will be under three divisions:

s 1. Primary Division. For teachers of first, second and third grades. *Five hours a week.* 2:30. Mrs. SPENCE.

s 2. Grammar Division. For teachers of fourth, fifth, sixth, and seventh grades. *Five hours a week.* 3:30. Mrs. SPENCE.

s 3. Advanced Division. For former students who have attained the required degree of proficiency and for supervisors of drawing. *Three hours a week.* 11:35 TTS. Mrs. SPENCE.

WRITING

Free arm movement will be the basis of all the work in writing. The courses offered are planned to make better teachers of writing, hence there will be two definite purposes in view, to improve the handwriting of those taking the courses, and to study best methods to be used in teaching children to write.

The courses offered will be helpful to teachers no matter what system they have to teach, as the instruction will be along broad lines, and principles rather than systems will be most emphasized.

In one class (1) the State-adopted copy book will be used, and methods will be emphasized. In another class (2) the prominence will be given to acquiring a free arm movement writing.

Model lessons in primary grades will be given, with and without copy books; blackboard writing; correlation of writing with other studies.

s 1. Handwriting in the Public Schools. A course for public school teachers. The *Berry Writing Books*, adopted for use in the public schools of North Carolina, will be used in the main, though not exclusively. Two sections, I and II. Each *three hours a week.* I, 8:30 TTS.; II, 2:30 MWF. Miss JONES.

s 2. Free Arm Movement. In this course the free arm movement will be emphasized; lectures and drills. Two sections, I and II. Each *three hours a week.* I, 8:30 MWF; II, 3:30 MWF. Miss JONES.

MUSIC

s 1. Public School Music. Sight-singing, rhythm, sense-training, observation, school music and mechanics. This course is intended primarily for the grade teacher in the public schools, and will be extended in any direction to suit the needs of the class. *Five hours a week.* Mr. HAGEDORN.

s 2. Public School Music. Sight-singing, chromatics, dictation, rhythm, two- and three-part singing, suggestions for chorus conducting, the selection of material, etc. *Five hours a week.* Mr. HAGEDORN.

s 3. Public School Music. A course intended for those wishing to qualify themselves as supervisors. It is open only to those who have completed courses 1 and 2 or their equivalent. This course will deal with especial tasks of the supervisor, his relation to the grade teacher, the mechanics of the music lesson, the formation of choruses, chorus conducting, public performances, and other problems. *Three hours a week.* Mr. HAGEDORN.

Those wishing to study Advanced Harmony or Instrumental Music can arrange for this with Professor Hagedorn.

A chorus will be organized under the direction of Professor Hagedorn and a Choral Concert will be given. The work selected for this year will be *The Rose Maiden* by Cowen.

DOMESTIC SCIENCE

Lectures and Demonstrations. *Five hours a week.* Mrs. CUNNINGHAM.

THE BUREAU OF EXTENSION

COMMITTEE

LOUIS ROUND WILSON, Ph. D., DIRECTOR.
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EUGENE CUNNINGHAM BRANSON, A. M.
LESTER ALONZO WILLIAMS, A. M., Pd. D.
ZEBULON VANCE JUDD, A. M.

The Bureau of Extension offers to the people of the State:

I. GENERAL INFORMATION

Concerning books, readings, essays, study outlines, and subjects of general interest. Literature will be loaned from the Library upon the payment of transportation charges each way.

II. INSTRUCTION BY LECTURES

Lectures of a popular or technical nature and addresses for commencement or other special occasions will be furnished any community which will pay the traveling expenses of the lecturer. The subjects offered fall into three groups, their nature being indicated by the letters A. B. C. as follows:

Lectures marked A. are popular and of general interest.

Lectures marked B. are specific or technical for study clubs, institutes, farmers' meetings, etc.

Lectures marked C. are lectures or addresses for special

meetings, such as commencement, patriotic, and dedicatory occasions, Memorial Day exercises, conventions, etc.

Lectures suitable for both general and special occasions are marked with two letters. In some instances the titles of commencement addresses are not given.

CHARLES WESLEY BAIN, A. M., LL. D., *Professor of Greek.*

- B. 2. Aeschylus.
 - B. 3. Sophocles.
 - B. 4. Euripides.
-

WILLIAM STANLY BERNARD, A.M., *Associate Professor of Greek.*

- A. or B. 1. History of Architecture (one or more lectures).
 - A. or B. 2. History of Sculpture (one or more lectures).
 - B. 1. What Is Art?
 - B. 2. Architecture and Civilization.
 - C. 1. Our Education vs. Culture.
-

JAMES MANNING BOOKER, Ph.D., *Associate Professor of English.*

- A. 1. The Fiction-Making Mind (illustrative reading).
 - A. 2. The Irish Plays (illustrative readings).
 - A. 3. The Dramatic Monologue (illustrations from Tennyson and Browning).
-

EUGENE CUNNINGHAM BRANSON, A. M., *Professor of Rural Economics and Sociology.*

- A. 1. Robert E. Lee, Gentleman.
 - A. 2. Know-Your-Home-State Clubs.
 - A. 3. Come, Let Us Live with Our Children.
 - B. 1. Home-County Study-Clubs.
 - B. 2. Community Nest-Eggs.
-

JAMES BELL BULLITT, A. M., M. D., *Professor of Pathology and Histology.*

- A. or B. 1. School Sanitation and Medical Inspection.
- A. or B. 2. Oral Hygiene.
- A. or B. 3. Bubonic Plague: Its Menace to this State.

HARRY WOODBURN CHASE, Ph. D., *Professor of Psychology.*

- A. 1. The New Education.
 - A. 2. The Making of the Individual.
 - A. 3. Heredity, Environment and Education.
 - B. 1. The Growth of Educational Standards.
 - B. 2. The School Survey and What It Means.
 - B. 3. The Backward Defective Pupil.
 - C. Commencement Addresses.
-

COLLIER COBB, A. M., *Professor of Geology and Mineralogy.*

- A. 1. Where the Wind Does the Work. (An account of the sand-reefs along the North Carolina Coast. Illustrated.)
 - A. 2. Lessons from the Landes of Gascony. (A region of swamp lands and dunes reclaimed by drainage and tree-planting. Illustrated.)
 - A. 3. The Work of Snow and Ice. (An account of the glaciers of the Alps and of Alaska. Illustrated.)
 - A. 4. Across the Alps. (Illustrated.)
 - B. 1. Geology in Relation to Soils, Drainage, and Crops.
 - B. 2. Geology and Water Supply.
 - C. 1. Education for Service.
-

WILLIAM CHAMBERS COKER, Ph. D., *Professor of Botany.*

- A. 1. A Visit to Luther Burbank. (A description of Mr. Burbank's fruit and flower breeding establishment at Sante Rosa, California. Illustrated.)
 - A. 2. Across Porto Rico. (A traveler's impressions of this beautiful tropical country. Illustrated.)
 - B. 1. Bacteriology for the Housewife. (Designed to give an idea of the structure and activities of bacteria and their relation to housekeeping. Illustrated.)
 - B. 2. Plant Breeding and Its Relation to the Improvement of Farm Crops. (Illustrated by specimens.)
-

PARKER HAYWARD DAGGETT, S. B., *Professor of Electrical Engineering.*

- A. 1. The Electrical Age. (Illustrated.)

- B. 1. Electric Light and Power in the Home. (Illustrated.)
 - B. 2. Electricity on the Farm. (Illustrated.)
-

EDWARD KIDDER GRAHAM, A. M., *President and Professor of English.*

- A. 1. The Progressive. (A popular lecture on community spirit and development.)
 - A. 2. The Enjoyment of Books. (A popular lecture on reading.)
 - C. 1. Ideals and Tasks.
-

EDWIN GREENLAW, Ph. D., *Professor of English.*

- A. or B. 1-4. Followers of the Gleam. (Being four studies in idealism in literature.)
 - 1. Sir Gawayne: The Chivalric Ideal.
 - 2. Sir Galahad: A Study in Mysticism.
 - 3. Sir Artegal: A Study in Political Idealism.
 - 4. The Scholar: A Phase of Modern Knighthood.
 - B. 5. Addresses on Programs of Study Clubs in English.
 - B. 6. The Ideal of Tragedy in Shakespere.
-

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph. D., *Alumni Professor of History.*

- A. 1. Andrew Jackson, a Product of Democracy.
 - A. 2. The Real Abraham Lincoln.
 - B. 1. The Locality as a Field for Historical Investigation.
 - C. or B. 1. The Question of Constitutional Amendment.
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ARCHIBALD HENDERSON, Ph. D., *Professor of Pure Mathematics.*

- A. or C. 1. The South's Awakening.
 - B. 1. The Teaching of Geometry.
 - B. 2. The Foundation of Geometry.
-

CHARLES HOLMES HERTY, Ph. D., *Smith Professor of General and Industrial Chemistry.*

- A. or B. 1. Chemistry in the Service of Cotton.
- A. or B. 2. Aiding Nature in our Pine Forests.
- B. 1. Home Illumination.

THOMAS FELIX HICKERSON, A. M., *Associate Professor of Civil Engineering.*

B. 1. Problems of Highway Location, Construction, and Maintenance.

B. 2. Engineering for Land Drainage.

B. 3. Private Water Systems for the Home and Farm.

GEORGE HOWE Ph. D., *Professor of Latin.*

A. 1. The Poetry of the Augustan Age.

B. 1. The Teaching of Latin in the High Schools.

EDWARD VERNON HOWELL, A. B., Ph. G., *Professor of Pharmacy.*

A. or B. 1. Narcotic and Other Injurious Drugs. What the Public Should Know about Them.

ZEBULON VANCE JUDD, A. M., *Professor of Rural Education.*

A. 1. A New Notion of Culture.

A. 2. New Ideals in Education.

A. 3. The Evolution of the Educational Ideal.

A. 4. What's the Matter with the Country Schools?

A. 5. Consolidation and Special Taxation as Means to Better Schools.

A. 6. How to Organize and Run (a) A School Betterment Association; (b) A School Farm; (c) Other Forms of School and Community Activity.

C. Commencement Addresses.

GEORGE MCFARLAND MCKIE, A. M., *Associate Professor of Public Speaking.*

A. 1. Recitals from Kipling.

A. 2. Recitals from Tennyson and Browning.

A. 3. Recitals from Modern American Humorists.

B. 1. The Essentials of Public Speech.

WILLIAM DEBERNIERE MACNIDER, M. D., *Professor of Pharmacology.*

A. or B. 1. The Origin and Prevention of Epidemics of Typhoid Fever.

B. 1. The Value of Diuretic Substances in Different Types of Nephritis. (For county medical meetings.)

B. 2. The Effect of Different Anesthetics on the Pathology of the Kidney in Acute Nephritis.

B. 2. The Effect of Chloroform and Ether on the Heart.

MARCUS CICERO STEPHENS NOBLE, *Professor of Pedagogy.*

A. 1. Scotland and Its Schools.

A. 2. Community Progress.

A. 3. Public Schools and Public Taxes.

A. 4. The Influence of Geography on North Carolina History.

B. 1. Methods of Teaching in the Public Schools.

B. 2. School Management, the Teacher, the Pupil, and the Parent.

C. Commencement and Educational Rally Addresses.

ANDREW HENRY PATTERSON, A. M., *Professor of Physics.*

A. 1. The Story of the Stars. (Illustrated.)

A. 2. The Gyroscope and Its Applications. (With experiments.)

A. 3. Sound Waves and Their Uses. (With experiments.)

B. 1. The Story of Radium. (With demonstrations.)

B. 2. The Teaching of First Year Physics. (With experiments.)

C. Commencement Addresses.

JOSEPH HYDE PRATT, Ph. D., *Professor of Economic Geology.*

A. 1. Natural Resources of North Carolina.

A. 2. The Forests of North Carolina.

A. 3. Swamp Lands and Their Reclamation.

A. 4. Road Problems in North Carolina.

EDGAR RALPH RANKIN, A. B., *Secretary of the High School Debating Union.*

- B. 1. How to Organize and Conduct High School Literary and Debating Societies.
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CHARLES LEE RAPER, Ph. D., *Professor of Economics.*

- A. or C. 1. Taxation by the State.
A. or C. 2. Taxation by the Municipality.
A. or C. 3. Taxation and the Proposed Amendments to the Constitution.
A. or C. 4. Co-operative Marketing of Farm Products
A. or C. 5. Credits Institutions for the Farmers.
A. or C. 6. The Effects of the European War on the People of the United States: (a) Their Money and Credit; (b) Their Wheat and Other Food Stuffs; (c) Their Cotton; (d) Their Cotton Goods and Other Textiles; (e) Their Labor and Wages; (f) Their Cost and Burden of Living.
C. Commencement Addresses.
-

MARVIN HENDRIX STACY, A. M., *Professor of Civil Engineering.*

- A. or C. 1. Some High School Problems.
B. 1. The Farmers' Part in Highway Improvement.
C. Commencement Addresses.
-

WALTER DALLAM TOY, A. M., *Professor of the Germanic Languages and Literatures.*

- A. or B. 1. The German Universities.
A. or B. 2. Martin Luther.
A. or B. 3. Bismarck. (Illustrated.)
-

FRANCIS PRESTON VENABLE, Ph. D., LL. D., *Professor of Chemistry.*

- A. 1. Some Lessons Taught by a Swiss City.
A. 2. Radium.

HENRY MCGILBERT WAGSTAFF, Ph. D., *Professor of History.*

- A. 1. The Underlying Causes of the European War.
-

NATHAN WILSON WALKER, A. B., *Professor of Secondary Education.*

- A. or C. 1. The School and the Community.
A. or C. 2. Education and Democracy.
A. or C. 3. Our Country High Schools and Their Work.
(Illustrated.)
A. or C. 4. The Newer Demands Upon the School and How
They Are to be Met.
A. or C. 5. The State's Educational Agencies.
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LESTER ALONZO WILLIAMS, A. M., Pd. D., *Professor of School Administration.*

- A. 1. Facts and Figures in Education.
A. 2. The School and the Community.
A. 3. Work, Play, Drudgery.
A. 4. James Whitcomb Riley, the Child's Poet.
B. 1. Those Little Animals We Teach.
B. 2. The Farm-Life School—Its Place in the Community.
C. Commencement Addresses.
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LOUIS ROUND WILSON, Ph. D., *Professor of Library Administration.*

- B. 1. The Public Library in Community Building.
B. 2. Books for the Farm and How to Get Them.
B. 3. The Library's Place in the High School Community.
-

III. CORRESPONDENCE COURSES

Announcement

The University of North Carolina offers through the Bureau of Extension a series of extra-mural courses by correspondence, conducted by its regular Faculty.

Purpose

These courses are a continuation of the extension policy of the University. The response to the correspondence courses offered last year has necessitated the enlargement of the scope of such work for this year. It is the ultimate purpose of these courses to make University instruction possible for every resident of North Carolina.

An attempt will be made to offer study courses for the teacher, the tradesman, the artisan, the general reader, the student along any line covered by the regular courses at the University. The extent of such courses will be determined by the calls received. The courses here presented are only a beginning.

Time Required

Except as otherwise indicated a full course will mean thirty (30) weekly lessons. Courses may be begun at any time between October and March. No assignments will be made and no lesson plans sent out from June to October except by special arrangement and by payment of an extra fee. If a course is begun too late in the college year to be completed before the close of the year, it may be completed the following term.

The time required by the student will vary with the course and with the aptitude of the student; no definite requirement is made by the University. What the student gets from the course depends upon his or her individual efforts.

Credit and Non-Credit

Certain of the courses as indicated will be allowed to count toward the A. B. degree under the restrictions as later stated. All other courses are considered non-credit courses and cannot be counted toward a degree. For further information as to the credit courses consult that section so headed in this bulletin.

Credit Courses

Certain courses indicated in this bulletin may be credited toward the A. B. degree. One-fourth of the number of courses required for this degree may be taken through correspondence but not over one-half of this total may be done in any one University year. A candidate must meet college entrance requirements before being allowed to take such work. A candidate wishing to

pursue more advanced courses must present satisfactory credentials as to his fitness to pursue such courses in addition to credentials for college entrance. For every credit course a fee of \$5 in addition to the registration fee of \$2 is required, e. g., one course \$7, two courses \$12, three courses \$17, etc. Final examinations in all courses must be taken by candidates either at the University or under conditions approved by the University.

Certificates

When a course has been satisfactorily completed, whether credit or non-credit, a certificate to that effect will be issued and sent to the student.

Fees

A fee of two dollars (\$2) will be charged for registration. In addition there will be the instruction fee of five dollars (\$5) for credit courses or of three dollars (\$3) for non-credit courses. Any other fees will be indicated in the announcement of the course in this bulletin. These fees are necessary to cover the cost of postage and of the clerical work. The instructors will be the regular members of the University faculty whose only reward will be the personal knowledge that they are serving the needs of the people in the state. They are freely and voluntarily giving their services.

No fees or parts of fees can be remitted after a course is once begun. Dropping a course before it is finished will necessitate a new registration fee as well as the usual instruction fees before another course can be pursued. All work for credit when once begun must be continued year after year consecutively or a new registration fee will be required in addition to the usual instruction fees.

Method of Procedure

1. Write to Mr. E. R. Rankin, Assistant Director of the Bureau of Extension, Chapel Hill, N. C., state your probable choice of courses, include the registration fee of two dollars (\$2), and ask for an enrollment card in the Division of Correspondence Study of the Bureau of Extension.

2. Upon the receipt of this card and the accompanying folders fill out the card as fully as possible, state the course or courses you wish to pursue, determine the cost for instruction,

extra fees, etc., and make out a check, postal money order or express money order to Bureau of Extension, University of North Carolina, and send card and money to Mr. E. R. Rankin, Chapel Hill, N. C.

3. Just as soon as the office at the University receives your money and your enrollment card, lessons 1 and 2 will be sent to you. Prepare lesson 1 and return to Mr. Rankin within a week. While lesson 1 is being corrected, work on lesson 2. Lesson 3 will be sent to you within one week from receipt of lesson 1, accompanied by the corrected lesson 1. Send lesson 2 upon receipt of lesson 3, and so on for the entire course, preparing one lesson while the previous one is being corrected.

4. Address all correspondence, prepared lessons, questions about lessons, books, etc., to Mr. E. R. Rankin, Chapel Hill, N. C.

COURSES OF INSTRUCTION

Drawing

c1. This course is designed to give the student who has never handled mathematical drawing instruments a thorough course of instruction in their use, and an understanding of the elementary principles of mechanical drawing. Instruction in free hand lettering is given in connection with this course. Text-book. *Credit course, two hours.* Assistant Professor JAMES. Fee, \$5. Drawing materials extra.

Economics

c1. General Economics. A general course in elementary economics. It will treat of the uses of wealth for living, development, and government. It will also treat of the making of wealth by means of agriculture, manufacturing, commerce, and transportation. *Half year, non-credit.* Professor RAPER. Fee, \$1.50.

c2. Applied Rural Economics and Sociology. Confined to a study of the student's own home county, as outlined in the University Home-County Club-Study Syllabus. The subjects covered are:—Historical Background, Natural Resources, Population Studies, Wealth and Taxation, Crops and Annual Products, Organization and Co-operation, Farm Credits and Markets, Improved Public Highways, Roadway Facilities, Public Schools and

Higher Education, Public Health and Sanitation, Church and Sunday School Problems, Country-Home Studies, Amusements and Recreations. *Full year course, non-credit.* Professor BRANSON. Fee, \$3.

Education

c 1. A brief study of the Principles of Teaching, the preparation of model lessons based on principles studied. *Non-credit.* Professor NOBLE. Fee, \$3.

c 2. High School Organization. A study of the history, function, organization, management, programme of studies, and internal equipment of the high school. Emphasis will be laid upon the rural public high school. Text-book, parallel readings, reports. Advanced course. *Credit course, one and one-half hours.* Professor WILLIAMS. Fee, \$5.

c 3. School Hygiene. A study of school grounds, buildings and equipment. The features of construction, decoration, sanitation and location will be considered. School-room diseases, medical inspection, care of exceptional children will be emphasized. *Non-credit.* Professor WILLIAMS. Fee, \$3.

c 4. The Psychology of Education. A study of the fundamental psychological principles underlying educational theory and practice. Text-book. *Non-credit.* Professor CHASE. Fee, \$3.

c 5. Rural Education. The social and industrial character of present day country life and the district, village and town school as its chief institution will be the concerns of this course. The chief problems of the home, the farm, and the associational life of the community will be discussed. The country school evolved in endeavor to offer solutions to these problems will be defined. The course will be conducted mainly with a view to aiding teachers now in service. Text-book and supplementary readings. *Credit course, three hours.* Professor JUDD. Fee, \$5.

c 6. Rural Educational Practice. A survey of the work of the better district, village and town schools of the United States will be made. Special features will be noted and an attempt made to evaluate them in terms of the environs of and demands upon one's own school. The teacher's relation to the larger problems

of the school's life will be considered: How to secure adequate revenue, suitable buildings, grounds, and equipment; how to organize the community and place its resources at the command of the school; how to reorganize the school and make it responsive to the recreational and social as well as the industrial demands of the community; how to lengthen the school term. The daily problems arising in and about the school will also receive attention: How to organize the school into grades and classes and to allot the work among the teachers; how to work out a daily teaching schedule, involving the combination, alternation, and correlation of subjects; how to keep the school records and make reports to the county superintendent; how to handle stubborn cases of discipline among the pupils and patrons; how to solve problems of sanitation; how to secure the enrollment and daily attendance of the pupils; how to prevent retardation and elimination and to hold the pupils through the school course; how to use the recess period; how to secure the co-operation of the pupils and patrons; how to develop and preserve the interest of the pupils in the daily study and recitations. Text-books and other readings and reports. *Credit course, two hours.* Professor JUDD. Fee, \$5.

Engineering

c 1. A course intended to supply the fundamental knowledge necessary for a thorough understanding of power-plant machinery. It may be taken to advantage by engineers and firemen who have had some practical experience but whose advancement is handicapped by a lack of knowledge of the underlying theory.

The course deals with the fundamental principles and laws governing the generation, transmission and transformation of heat, and their application to practical problems. A good working knowledge of arithmetic and the ability to handle problems involving simple formulas is required. *Non-credit.* Professor DAGGETT. Fees, \$3, plus text-book, \$2.

c 2. Steam Boilers. This course is intended for students and others interested in the installation, operation or management of boiler-plants. It deals mainly with boiler types, their construction, operation and maintenance. Especial attention is devoted to the question of efficient combustion and proper methods of firing. *Non-credit.* Professor DAGGETT. Fees, \$3, plus text-book, \$2.50.

c 3. Electricity and Magnetism. This course is designed for those students who have had practical experience with electrical apparatus, but who lack the necessary knowledge of fundamental principles so essential for advancement in their work. Most of the topics considered are developed first experimentally, then the theory is explained, after which the practical applications are discussed briefly.

The necessary apparatus for the experiments is lent by the Extension Bureau to students within the State on payment of a small fee, but students living outside the State must provide their own apparatus. A large number of practical problems will be solved for which a good knowledge of arithmetic will be necessary. *Non-credit*. Professor DAGGETT. Fees, \$3, plus text-book, \$1.50, plus apparatus fee.

c 4. Electric Meters. A course dealing with the construction, principle of operation, use and testing of electrical measuring instruments. Among the subjects treated are: Fundamental electrical principles, current and pressure measuring instruments, power measuring instruments, phase and frequency meters, recording meters, watt-hour meters, meter testing and instrument errors.

Students electing this course should have some knowledge of algebra and trigonometry. *Non-credit*. Professor DAGGETT. Fees, \$3, plus text-book, \$2.50.

(Note. In all of these courses the text-books will be furnished from the University for the amounts named, the books becoming the property of the student.)

c 5. Mechanics of Engineering. The theory of mechanics as applied to engineering structures and machines: (1) Statics, the action of forces on rigid bodies. (2) Kinetics, a study of the motion of a body under applied forces. (3) Inertia and friction, work and energy. (4) Study of the internal stresses in bodies and structures on which forces act. Text-book. *Non-credit*. Assistant Professor JAMES. Fee, \$3.

(A knowledge of Algebra through quadratics, analytic geometry and calculus are prerequisite to the course.)

English

c 1. Freshman English. Themes are written throughout the year; analytical outlines are prepared about twice a month; a dozen expository essays are studied in detail with chief emphasis on the ideas contained in them. In the second term some attention is given to narration. This course aims at (1) correct writing, (2) clear thinking, and (3) thorough reading. Required of all Freshmen. *Credit course, three hours.* The Professors of the English Department. Fee, \$5.

c 2. The History of English Literature in Outline. A study of representative prose and verse from Beowulf to the end of the Nineteenth Century. The stress falls upon the actual study of literature rather than literary history, biography, or criticism, but a Syllabus is used as a guide. Reports, outlines, and summaries, based on the material read, are required at frequent intervals. Required of all Sophomores in the College of Liberal Arts. *Credit course, three hours.* The Professors of the English Department. Fee, \$5.

Geology

c 1. Elementary Geology. Lectures with reading and field work; home laboratory work on common minerals and rocks. Open only to students who have had Geology 1 in the College or Geology 3 in the Summer School, and given to complete these courses. *Credit course, three hours.* Professor COBB. Fee, \$5, plus carrying charges on minerals and rocks.

(This course can be given only when five or more from one central point apply for it, since it is desirable that the teacher visit the class for field work.)

c 2. Advanced Geological Field Work and Special Research. Geology 13 of the College, and to be taken in extension of that work. *Credit course, one and one-half hours.* Professor COBB. Fee, \$5, plus field expenses of the teachers.

German

c 1. An elementary course equivalent to the first year of high school German. Drill in the essentials of German grammar, translation of easy idiomatic German. *Non-credit.* Professor TOX. Fee, \$3.

Greek

c A. A course for students who have had no opportunity of studying Greek in the preparatory schools. This course may be counted for entrance only. *Non-credit*. Associate Professor BERNARD. Fee, \$5.

(Note. This course is open only to those students who have begun the work in the Summer School.)

c 1. Zenophon's Symposium: Review of important grammatical principles; Homer's *Iliad*, books I, II, and III, and *Odyssey*, book VI; Lysias, *Selected Speeches*. Reading at sight. Freshman course. *Credit course, four hours*. Professor BAIN and Associate Professor BERNARD. Fee, \$5.

c 2. Plato, Apology and Crito; Euripides, Hecuba; Aristophanes, Frogs; reading at sight; lectures on Greek Literature. Sophomore course, calls for c 1 as a prerequisite. *Credit course, three hours*. Professor BAIN. Fee, \$5.

c 6. Homer: Rapid reading of the entire *Odyssey*. Junior and Senior elective. Calls for prerequisites. *Credit course, two hours*. Associate Professor BERNARD. Fee, \$5.

History

c 1. Modern European History. A course of study dealing with the primary factors that shaped European history from the close of the great religious war, 1648, (The Thirty Years War) to the present time. The present Europe will be interpreted by a study of the influences that gave its nations their present boundaries, their particular forms of government, and their national ideals and ambitions. Outline studies, texts and reference readings. A Junior and Senior course. *Credit course, two hours*. Professor WAGSTAFF. Fee, \$5.

(Note. Anyone desiring to take this course but not caring for credit may do so by paying the fee.)

c 2. North Carolina History. A study of the leading facts of the history of the state during the Colonial and Revolutionary periods together with a survey of the industrial and educational development down to the Civil War. *Non-credit*. Professor NOBLE. Fee, \$3.

c 3. American History. A general course covering the social, political and economic development of the United States. Text-book, syllabus, papers and readings. *Credit course, three hours.* Professor HAMILTON. Fee, \$5.

c 4. American History. An outline course in American History. Text-book and syllabus. Less detailed than c 3 above. Designed for high school teachers of American History. *Non-credit.* Professor HAMILTON. Fee, \$3.

c 5. Civics, "How we are governed in North Carolina and the United States." An elementary course in government. *Non-credit.* Professor HAMILTON. Fee, \$3.

(This course will not be given until September, 1915.)

Latin

c A. Cæsar's Gallic War: Translation; special study of case constructions, analysis of subordinate clauses, exercises in indirect discourse; vocabulary and word-derivation; studies in the content. *Non-credit.* Professor HOWE. Fee, \$3.

c 1. Cicero, De Senectute and De Amicitia; Livy, selections; Horace, selected Odes and Epodes; exercises in syntax based on the text read; sight translation. This course is the same as course 1-2 offered in the regular session. *Credit course, four hours.* Professor HOWE. Fee, \$5.

c 2. Latin Composition. The course will begin with translation into Latin of detached sentences illustrating the general principles of syntax and word-order; the second half will deal with continuous narrative and with questions of diction and style. *Credit course, two hours.* Assistant Professor HENRY. Fee, \$5.

(Note. These courses will be of value particularly to high school teachers of Latin.)

Mathematics

c 1. A review of the principles of arithmetic. Special attention to High School arithmetic. *Non-credit.* Professor NOBLE. Fee, \$3.

c 2. Solid Geometry. A careful study of the text. Original problems. Text-book. *Non-credit.* Professor HENDERSON. Fee, \$3.

IV. GUIDANCE IN DEBATE AND DECLAMATION

This division of the Bureau of Extension offers assistance in two ways:

1. Material is sent from the Library for use in debate and declamation upon the payment of the transportation charges.
2. Through the High School Debating Union it supervises a state-wide debate which culminates in the contest at the University for the Aycock Memorial Cup.

The final contest of the session 1912-1913, in which seventeen schools out of ninety participated, was won by Messrs. Grady Bowman and Samuel C. Hodgins of the Pleasant Garden High School, Guilford County. The final contest of the session 1913-1914, in which forty-one schools out of one hundred and fifty participated, was won by Messrs. Clifton Eaton and Charles Roddick of the Winston-Salem High School.

The following bulletins have been issued:

Woman's Suffrage.

Addresses on Education for Use in Declamation.

The Initiative and Referendum.

Public Discussion and Debate.

Ship Subsidies.

V. COUNTY ECONOMIC AND SOCIAL SURVEYS

This division of the Bureau of Extension has the supervision of the investigations of the County Clubs, whose purpose is to aid through wisely directed study the efforts to better the economic and social conditions in the various communities of the State.

The following bulletins have been issued:

Co-operative Institutions Among the Farmers of Catawba County.

Syllabus of Home-County Club Studies.

VI. MUNICIPAL AND LEGISLATIVE REFERENCE AIDS

The work of this division consists in the study of legislative problems and in the furnishing of material that bears upon current legislation.

VII. EDUCATIONAL INFORMATION AND ASSISTANCE

For teachers, principals, superintendents, school communities and boards. The School of Education acts as a clearing house for information concerning all phases of educational work and conducts a teacher's bureau as an aid to communities and schools in securing efficient teachers.

PUBLICATIONS

The Bureau of Extension maintains the following publications:

Extension Series Bulletin.

School of Education Letter Series.

University of North Carolina News Letter.

PART FIVE

THE UNIVERSITY LIBRARY
PUBLIC LECTURES
THE BYNUM GYMNASIUM
LABORATORIES
UNIVERSITY ORGANIZATIONS

THE UNIVERSITY LIBRARY

OFFICERS

- LOUIS ROUND WILSON, Ph. D., *Librarian*.
CHARLES LEE RAPER, Ph. D., *Committeeman*.
WILLIAM CHAMBERS COKER, Ph. D., *Committeeman*.
WILLIAM MORTON DEY, Ph. D., *Committeeman*.
EDWIN GREENLAW, Ph. D., *Committeeman*.
NAN SPOTSWOOD STRUDWICK, B. L. S., *Assistant Librarian*.
ANNIE JUNGERMANN, *Assistant Librarian*.
FRANK HODGES COOPER, *Assistant in the Library*.
JAMES REGINALD MALLETT, *Assistant in the Library*.
WILLIAM CECIL RYMER, *Assistant in the Library*.
DANIEL LAMONT SECKINGER, *Assistant in the Library*.
WILLIAM RAYMOND TAYLOR, *Assistant in the Library*.

The University Library contained at the end of the academic year 1913-1914 seventy-one thousand two hundred and ninety-five volumes and about nineteen thousand two hundred and fifty pamphlets. This collection has been largely classified and catalogued according to the Dewey, or decimal system, and its contents have been rendered easily accessible by means of a thorough dictionary author, title, and subject card catalogue.

The Library funds are expended under the direction of the Librarian, the Library Committee, and Professors in charge of Departments with special reference to the instruction given in the University. The annual addition of books from purchase, donations, and exchanges is about thirty-seven hundred volumes, all of which are carefully classified and catalogued as they are received.

The Librarian and those assisting in the Library are constantly in attendance to give help in any line of research or reading. A special collection of dictionaries, encyclopedias, almanacs, handbooks, atlases, concordances, and other reference books is provided for general use in the reference room.

In addition to the resources of the general reference room, the Library places at the disposal of students for reference purposes a collection of ten thousand bound periodicals covering all fields of general, technical, and professional information. A great number of the sets belonging to this collection are complete from their beginning, and consequently completely cover the history and progress of the subjects of which they treat. In this way students pursuing a general academic and special technical or professional courses have access to the best American, English, and Continental periodical literature to be found on their subjects. The articles contained in these files are fully indexed in special periodical indexes and are referred to with ease.

Eight hundred and forty-eight current periodicals, transactions of literary, scientific, historical and other societies, university studies, serial publications, and a half hundred daily and weekly newspapers, continuing and supplementing the bound sets, are subscribed for and received annually. They are to be found in the general periodical room and in the seminars, professional schools, and scientific laboratories, where they can be consulted in the course of daily work.

As the Library is a depository for the publications of the United States government, it contains more than seven thousand volumes of material especially valuable for reference in debate and in the study of social and political science, useful arts, and the natural sciences. This collection is thoroughly indexed and its contents are easily consulted.

Five special seminar rooms have been equipped in the general Library to facilitate advanced work in English and German Literatures and Languages, Greek and Latin Literatures and Languages, the Romance Literatures and Languages, History, and North Carolina History. Special scientific and professional collections are to be found in the libraries or seminars belonging to the departments in which such instruction is given. These collections are under the supervision of the instructors in the respective departments and the Librarian, and aid is given students in the use of books relating to their work.

The main Library is housed in a commodious modern library building erected in 1907, and represents an expenditure for construction and equipment of \$66,500.00. The reference, current periodical, and seminar rooms in the main Library are large,

well lighted, and have table and seating capacity for two hundred students at one time.

The stack room contains two levels of steel shelving with stairway and glass mezzanine floor between and, with its present complement of shelving, capacity for seventy thousand volumes. Its ultimate capacity is one hundred and five thousand volumes, which, taken with that of the other parts of the building, totals one hundred and seventy-five thousand volumes.

Brief instruction in the use of the card catalogue, the periodical indexes, and the reference books generally, is given new students at the beginning of each year, and to any student at any time who may request it. Instruction in a regular University class is also given to students who are preparing for positions in school and public libraries with a view to making them more efficient in the discharge of their special duties.

The Library is open on week days from 8:30 A. M. to 1:15 P. M., and from 2:00 P. M., to 5:00 P. M.; on week day evenings, Saturday excepted, from 7:00 P. M. to 9:30 P. M.; on Sundays, from 2:30 P. M. to 4:30 P. M.; on University holidays from 3:00 P. M. to 4:00 P. M.

The following rules are considered necessary for the proper use of the Library. They will be enforced with strict impartiality.

Subscribers to the Library are the students and members of the faculty.

Other persons who desire to use the Library may become subscribers on payment of the regular Library fee.

The Library fee is four dollars a year, two dollars a term, or fifty cents a month.

Persons who are not subscribers may not borrow books on a subscriber's name.

Not more than three books may be charged to one name at the same time.

Fines for books kept over fourteen days (including the day of issue) will be imposed with exact regularity at the rate of five cents per day. Books borrowed for debate or for class use may be kept out from 9 P. M. until 10 A. M. of the following day. After that hour they are subject to a fine at the rate of

five cents per hour. The date on the pocket on fly-leaf of book is sufficient notice when the book is due.

Failure to pay fines within three weeks from the time they are due will debar the delinquent from further use of the Library.

Books from the reference room must remain in the Library during Library hours. They may be loaned only at the discretion of the Librarian.

Magazines must not be removed from the Library until they are bound. If removed they are subject to the regulations applying to debate books.

Mutilation of books or magazines, or defacement by writing in them, must be paid for by purchase of a new copy.

Any conversation in the Library, except to obtain books desired, is forbidden.

Continued disregard for any of these rules will cause the offender to forfeit the right to use the Library.

PUBLIC LECTURES

THE JOHN CALVIN McNAIR LECTURES

The lecture fund established by the will of John Calvin McNair, of the class of 1849, became available in 1906, and the interest therefrom rendered it possible to begin the lectures in 1908. The honorarium for the lectures amounts to \$500, and the remainder of the interest from the fund provides for the suitable publication of the lectures. Under the will the objects of the lectures "shall be to show the mutual bearing of science and religion upon each other and to prove the existence of attributes (as far as may be) of God from nature."

The lectures for 1908 were delivered by Professor Francis H. Smith, LL. D., of the University of Virginia. The three lectures were:

1. The general theme: God Manifest in the Material Universe.
2. His Attributes as Manifested in Physics.
3. His Attributes as Manifested in Astronomy.

The lectures for 1909 were delivered by President Francis Landey Patton, D. D., LL. D., of Princeton Theological Seminary, New Jersey. The four lectures were:

1. The Authority of the Bible.
2. The Authority of the Church.
3. The Authority of Christ.
4. The Authority of the Reason.

The lectures for 1910 were delivered by President David Starr Jordan, Ph. D., M. D., LL. D., of Leland Stanford, Jr., University, California. The lectures were on the theme:

The Stability of Truth.

The lectures for 1911 were delivered by Professor Henry Van Dyke, D. D., LL. D., of Princeton University. The three lectures were:

1. The Poetry of Nature.
2. The Poetry of Patriotism and Humanity.
3. The Poetry of the Unseen World.

The lectures for 1912 were delivered by President Arthur Twining Hadley, A. M., LL. D., of Yale University. The three lectures on the general subject, Some Tendencies of Modern Philosophic Thought, were:

1. Changed Conceptions of Science.
2. New Views of Ethics and of Politics.
3. The Spiritual Basis of Modern Literature.

The lectures for 1913 were delivered by Professor Francis G. Peabody, A. M., D. D., LL. D., of Harvard University. The three lectures were:

1. The Practicability of the Christian Life.
2. The Christian Life and the Modern Home.
3. The Christian Life and Modern Business.

The lectures for 1914 were delivered by President George Edgar Vincent, Ph.D., LL. D., of the University of Minnesota. The title of the series was The Social Vision, and the lectures were:

1. The Sense of the State.
2. The Larger Selfishness.
3. The Kingdom of God.

The lectures for 1915 were delivered by Professor John Dewey, Ph. D., LL. D., of Columbia University. The three lectures on the general theme, Philosophy and Politics, were:

1. The Division into the Inner and the Outer World.
2. The State and Moral Life.
3. The Philosophy of History.

UNIVERSITY LECTURES

The following University lectures were delivered during the session 1913-1914:

Mr. R. T. Wyche: Uncle Remus Stories.

Mr. Alfred Noyes, Litt. D.: Reading of Selected Poems.

Mr. Woods Hutchinson, A. M., M. D.: Nerves, Ancient and Modern.

Mr. Joseph Austin Holmes, D. Sc., LL. D.: Alaska.

Mr. Gaillard Hunt: A Century of Peace.

SOUTHERN EXCHANGE LECTURESHIP

The purposes of this lectureship are: to promote scholarship; to present in concrete form recent advances in some special branch of learning; and to bring the institutions concerned into closer relationship through exchange of ideas in regard to all vital problems affecting a modern university.

The exchange lecturer to the University for 1914-1915 was Dean W. M. Thornton of the University of Virginia. Prof. F. P. Venable delivered the lectures at the University of South Carolina.

UNIVERSITY SERMONS

The University sermons for the session 1913-1914 were delivered by:

Rev. Martin W. Buch, of Burlington.

Rev. B. F. Huske, of Newbern.

Rev. Neal Anderson, D. D., of Winston-Salem.

Rev. Charles P. MacLaughlin, of Concord.

Rev. Leslie P. Howard, of Durham.

Rev. Isaiah W. Sneath, Ph. D., of Wollaston, Mass.

WILLIAM PRESTON BYNUM, JR., GYMNASIUM

ROBERT BAKER LAWSON, M. D., *Director*.

THOMAS MOORE PRICE, *Assistant*.

FRANCIS OSBORNE CLARKSON, *Assistant*.

The William Preston Bynum, Jr., Gymnasium, the gift of Judge William Preston Bynum, in memory of his grandson, William Preston Bynum, Jr., of the class of 1893, is a handsome, two-storied brick building, furnished with modern apparatus, swimming pool, baths, lockers, and running track. It contains also the trophy room and the office of the Physical Director.

Exercise in the Gymnasium is required three hours a week of all freshmen, unless excused by the Physical Director. In the fall, a thorough physical examination of each freshman is made and the heart, the lungs, the eyes, and the ears are tested, in order that students defective in physical development may be given special work under the personal supervision of the Director. Round shoulders, flat chests, curvature of the spinal column, hernia, and mild cases of congenital paralysis are thus often greatly benefited and sometimes completely corrected. No student need fear ill results from the work. It is absolutely free from strain of any sort, and is directed in strict accordance with the results of the physical examination. It is impossible to attach too much importance to this examination, since it points out the muscular, functional, or organic defects, and enables the student to direct his efforts toward their correction.

LABORATORIES AND MUSEUMS

THE PHYSICAL LABORATORIES

ANDREW HENRY PATTERSON, A. M., *DIRECTOR and Professor of Physics.*

PARKER HAYWARD DAGGETT, S. B., *Professor of Electrical Engineering.*

VIVIAN LEROY CHRISLER, A. M., *Instructor in Physics.*

JOHN WESLEY MCIVER, S. B., *Fellow in Electrical Engineering.*

EDWIN FULLER CONRAD, *Assistant in Physics.*

GEORGE WALLACE SMITH, *Assistant in Physics.*

VANN WARD MCGEE, *Assistant in Physics.*

LEE HENRY EDWARDS, *Assistant in Physics.*

MALCOLM NORVAL OATES, S. B., *Assistant in Electrical Engineering.*

The Physical Laboratory occupies the eastern half of the main floor and almost the whole of the basement floor of the Alumni Building, amounting to about eight thousand square feet of floor space.

The main floor is divided into a large lecture room, an apparatus room and two laboratories for students in the general course.

In the rooms of the basement are located a large lecture room and the electrical laboratories, including a dynamo laboratory, photometric laboratory, storage-battery room, standardizing laboratory, high-tension laboratory, a laboratory for electric and magnetic measurements and the departmental library and office.

The dynamo laboratory is equipped with standard types of machines varying in size from 2 to 10 h. p., including various shunt and compound dynamos, a 2 h. p. series crane-motor, 3 h. p. commutating-pole motor, 5 kv. a., 3-phase alternator, 3.5 kv. a. polyphase alternator, 2 h. p., single-phase induction motor, 3 h. p., 3-phase induction motor of squirrel-cage type, 5 h. p., 3-phase induction motor, slip-ring type, 3 kw. polyphase

synchronous converter, a number of distributing type transformers and a set of transformers with taps for "T" connection. There are also provided a large number of rheostats, controllers and starting boxes, a large lamp bank arranged for delta or star connection and two portable testing tables with facilities for rapid testing work. None of the windings of the machines is connected up permanently, but all windings and all apparatus are fitted with a plug-and-socket system of connections, and the students are required to make all the connections for each test.

The photometric laboratory is equipped with a standard Reichsanstalt photometer bench with three-meter track, Bunsen screen, Lummer-Brodhun disappearance and contrast screens, and a flicker photometer built by the students. There is also a small photometer arranged for rapid commercial testing. The laboratory is supplied with the following photometric accessories: standard Hefner lamp; a number of certified carbon and tungsten incandescent standards; a compound rotator and an arc lamp mirror selector for taking flux distribution curves; a luxometer for illumination surveys, and a number of shades and reflectors of various types. The laboratory is also supplied with constant potential and constant current arc lamps, direct and alternating current types, a 4-ampere magnetite arc, 12-ampere flaming-arc and a 3.5-ampere mercury-arc.

The storage battery room contains sixty 240-ampere-hour cells made by the Electric Storage Battery Co. This battery furnishes a steady supply of direct current at 120 volts for photometric work, calibration of instruments and for general testing. The voltage is controlled by 8 end-cells located in a room off the dynamo laboratory.

The standardizing laboratory is equipped with a Weston laboratory standard voltmeter, a Siemens-Halske laboratory standard ammeter, Hartmann & Braun Hot-wire voltmeter and ammeter for intermediate standards, a number of Weston standard cells and a Leeds and Northrup Potentiometer with volt-box and a set of standard shunts and multipliers. The circuits of the room are arranged for rapidly calibrating the laboratory testing instruments at any time.

The electric light, central heating, and waterworks plants constitute valuable adjuncts to the laboratory. For work in practical testing there are available a 35 h. p. Ball engine, a 20

h. p. slide-valve engine, two types of steam pump, two gasoline engines, with calorimeters, meters, thermometers, Orsat apparatus, indicators and other accessory apparatus necessary for making complete tests on power plants. The central power plant of the University also contains a 115 h. p. Ball and Wood engine, direct-connected to a Crocker-Wheeler 3-phase generator; a 70 h. p. Skinner engine with direct-connected General Electric 3-phase generator; a 50 h. p. De Laval steam turbine; a D'Olier four-stage centrifugal pump, direct-connected to a 75 h. p., 3-phase Crocker-Wheeler motor, and all necessary accessories.

CHEMISTRY HALL

CHARLES HOLMES HERTY, Ph. D., DIRECTOR and *Smith Professor of General and Industrial Chemistry.*

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., *Francis Preston Venable Professor of Chemistry.*

ALVIN SAWYER WHEELER, Ph. D., *Professor of Organic Chemistry.*

JAMES MUNSIE BELL, Ph. D., *Professor of Physical Chemistry.*

WILLIAM LEWIS JEFFRIES, A. M., *Instructor in Chemistry.*

CARNIE BLAKE CARTER, M. S., *LeDoux Fellow in Chemistry.*

VICTOR ALDINE COULTER, M. S., *Fellow in Chemistry.*

VICTOR CLYDE EDWARDS, A. B., *Fellow in Organic Chemistry.*

LUCIUS COLEMAN HALL, *Assistant in Chemistry.*

OSCAR ASA PICKETT, *Assistant in Chemistry.*

WILLIAM NELSON PRITCHARD, *Assistant in Chemistry.*

Chemistry Hall is located east of Alumni Hall and north of the New East Building. The main portion of the building is 120 feet long and 68 feet wide, and to the rear is the main lecture room, 41 by 62 feet. The building is of pepper and salt brick.

The laboratories are lighted by electricity and are heated by hot water from the central Power Plant of the University. The storage battery in the Alumni Building furnishes current for Electrochemical experiments, for motors and for stereopticon purposes.

In the halls of the main floor are numerous museum cases with

specimens of typical chemicals, minerals and chemical products, many of which have been presented to the department by commercial firms. Each laboratory is provided with fume closets for the removal of noxious gases. Following is a directory of the building:

Main Floor

Room 1. Office of the Director	Room 9. Private laboratory
Room 2. Private laboratory	Room 10. Biological Chemistry (36 desks)
Room 3. Departmental library	Room 11. Office
Room 4. Research laboratory	Room 12. Organic Chemistry (22 desks)
Room 5. Balance Room	Room 13. Private laboratory
Room 6. Quantitative Analysis (24 desks)	
Room 7. Private laboratory	
Room 8. General Lecture Room (seating 200)	

Second Floor

Room 14. Hydrogen Sulfide Room	Room 18. Elementary Chemistry (78 desks)
Room 15. Qualitative and quantitative laboratory (56 desks)	Room 19. Balance Room
Room 16. Qualitative laboratory (90 desks)	Room 20. Physical Chemistry (8 desks)
Room 17. Lecture room (seating 50)	Room 21. Private laboratory
	Room 22. Elementary Chemistry (16 desks)

Basement

Room 23. Store room A. (With elevator to each floor)	Room 30. Machine and tool room
Room 24. Heavy chemical room	Room 31. Photochemistry
Room 25. Store room B.	Room 32. Constant temperature room
Room 26. Toilet room.	Room 33. Assay Room.
Room 27. Research laboratory	Room 34. Gas machine and gas analysis room
Room 28. Fire-proof room	Room 35. Lecture room (seating 40)
Room 29. Lumber room	

THE BIOLOGICAL LABORATORY

HENRY VAN PETERS WILSON, Ph. D., *DIRECTOR*, and *Professor of Zoology*.

WILLIAM CHAMBERS COKER, Ph. D., *Professor of Botany*.

WESLEY CRITZ GEORGE, A. M., *Instructor in Zoology*.

HENRY ROLAND TOTTEN, A. B., *Instructor in Botany*.

WILLIAM RANEY STANFORD, *Assistant in Zoology*.

ADAM TREDWELL THORP, *Assistant in Zoology*.

The Biological Laboratory, Davie Hall, is occupied by the Departments of Zoology and Botany. The building is a rectangular structure of pepper and salt brick and is divided into a main body and two wings. The total length is 125 feet, the depth of the main body 44 feet, that of the wings 38 feet. A basement underlies the whole, above which are two floors. The main body has an additional third chamber, which extends out over the wings, forming spacious air chambers. The building faces north and south, lies to the east of the New East, and adjoins the Arboretum.

The entrance hall, on the first floor, lighted with large windows on either side of the main doorway, serves for the exhibition of museum specimens of a more popular character. Back of the entrance hall are herbarium, a room for charts and other lecture apparatus, and a room for the storage of zoological specimens. The west wing of this floor is occupied by a lecture room with a seating capacity of one hundred and twenty, the east wing by a laboratory for the elementary classes in zoology and botany. The latter laboratory is arranged for twenty-four wall tables with window in front of each table.

On the second floor the east wing is occupied by a single large laboratory for advanced work in zoology and the west wing by a similar laboratory for advanced work in botany. Each of these rooms accommodates twenty workers and is lighted on three sides with twenty windows. The main building on this floor includes private work rooms for the professors of zoology and botany, two store rooms, and a library. On the third floor of the main body is a photographic studio with windows on the north side extending to the floor, and with skylights. In the basement are a fire proof incubator room, a room for micro-photography

with adjoining dark room, janitor's shop, and rooms for the storage of heavy supplies. The wings in the basement are designed for the keeping of live animals and plants for experimental work in botany and zoology. The building is provided with electric lights and is heated by hot water.

THE GEOLOGICAL LABORATORY AND MUSEUM

COLLIER COBB, A. M., *DIRECTOR and Professor of Geology and Mineralogy.*

JOSEPH HYDE PRATT, Ph. D., *State Geologist and Professor of Economic Geology.*

JOHN ELIPHALET SMITH, M. S., *Instructor in Geology.*

ALLYN RAYMOND BROWNSON, A. B., *Assistant in Geology.*

BASCOM LEE FEILD, *Assistant in Geology.*

The Geological Laboratory occupies the first floor of the New East building. In addition to a lecture room with a seating capacity of about fifty, there is a large laboratory supplied with working collections of minerals, rocks, and fossils, and with photographs, maps, and models illustrating geological structure. The laboratory is furnished with three petrographical microscopes, with two microscopes for soil study, and with apparatus for the slicing and polishing of rocks. Microscopic slides have been made of most of the specimens from North Carolina; the department has, also, sections of the typical European rocks. Sections of the rocks around Chapel Hill, and the igneous rocks of the Boston Basin, made by the late Hunter Lee Harris, of the class of 1889, were given to the geological department. There is a room for photographic work.

The University possesses a collection of more than two thousand specimens of building stones, coal, and various products illustrating the economic geology of the State. These are arranged in an exhibition room of six hundred and fifty square feet of floor space. Here also are kept the sections taken with a diamond drill in the coal regions of Pennsylvania, in the region around King's Mountain, where the Summer School of Geology held its sessions, in the Dan River coal fields, and in the Triassic Rocks at Durham, N. C. A complete set of the ores of the precious metals found along the line of the Atchison, Topeka, and

Santa Fe Railroad is included in the collection. Valuable additions have been made to the collection of fossils also, affording increased opportunity for laboratory work in historical geology and paleontology. The collection illustrating economic geology has been largely increased by the addition of many specimens from the mining regions of Northern Ontario. Stereograph and lantern slides illustrating geological phenomena in all parts of the world and lantern slides showing mining methods in all the great mining regions are in constant use.

The department library, which occupies a room adjoining the exhibition room, is supplied with State and United States Reports, the papers of working geologists, the best works upon Geology, and scientific periodicals.

UNIVERSITY ORGANIZATIONS

THE DIALECTIC AND PHILANTHROPIC LITERARY SOCIETIES

The Dialectic and Philanthropic Literary Societies were organized in 1795, the year of the opening of the University. Their existence has been inseparably linked with that of the University, and they have shown remarkable power in developing character as well as in training the intellect. They offer facilities for practice in debate, oratory, declamation, and essay writing; and their members become practically familiar with parliamentary law and usage.

Each society owns a large, handsomely furnished hall, the walls of which are hung with oil portraits of illustrious members. Meetings are held by each society every Saturday evening during the college year, admission being confined to members. Public contests in debate between the two societies are conducted twice a year, and in addition to these, there is a system of intercollegiate debates. On Monday evening before Commencement the Inter-Society banquet is held, after which each society has its annual reunion. On Tuesday evening preceding Commencement day four representatives elected from the two societies have a public competition in debate, and a prize is awarded to the successful competitors.

By immemorial custom, students from the eastern half of the State usually join the Philanthropic Society, while those from the western half join the Dialectic Society. Although membership in the societies is entirely optional, yet it is earnestly recommended by the faculty as furnishing unusual opportunities not only for literary culture, but also for the development of self control and the power to persuade and control others.

ELISHA MITCHELL SCIENTIFIC SOCIETY

JAMES MUNSIE BELL, Ph. D., *President.*

ANDREW HENRY PATTERSON, A. M., *Vice-President.*

FRANCIS PRESTON VENABLE, Ph. D., D. Sc., LL. D., *Permanent Secretary and Treasurer.*

THOMAS FELIX HICKERSON, S. B., A. M., *Recording Secretary.*

The Elisha Mitchell Scientific Society holds monthly meetings during the college year for the discussion of scientific subjects. A Journal, which is the official organ of the North Carolina Academy of Science, is issued quarterly. The object of the Society is to encourage scientific research and to record such matters as pertain to the natural history of the State. The membership is at present restricted to the faculty and students of the University, and members of the staff of the Geological Survey.

At the monthly meetings, which are ordinarily held on the second Tuesday of each month, excellent opportunities are afforded the students to get beyond the ordinary routine of the class room by hearing, reading, and discussing papers on scientific subjects.

The Journal is in a measure a bulletin of the scientific laboratories of the University, and contains many articles written by research students. It is now in the twenty-seventh year. The volumes already issued contain twenty-five hundred pages. By the exchange of the Journal with more than three hundred scientific journals and periodicals, over ten thousand books and pamphlets have been collected, all of which are arranged in the University Library.

THE NORTH CAROLINA HISTORICAL SOCIETY

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph. D., *President*.

HENRY MCGILBERT WAGSTAFF, Ph. D., *Vice-President*.

CLAUDE ALFRED BOSEMAN, *Secretary*.

JOSEPH GREGOIRE DEROULHAC HAMILTON, Ph. D., *Permanent Secretary*.

The North Carolina Historical Society was founded in 1833 by Governor David L. Swain. When Governor Swain became President of the University, the Society was moved from Raleigh to Chapel Hill. Under his leadership it became the centre of historical work in the State and the medium of many notable contributions to the history of the State. On March 22, 1875, through the activity of Kemp Plummer Battle, LL. D., the Society was chartered by an act of the General Assembly. The purpose of the Society is to collect, classify, and publish material illustrative of the history of the State. The Society possesses a valuable collection of books, pamphlets, manuscripts, newspaper

files, coins, and other objects of historic interest. The educational aim of the Society is to create a love for historical study and to give training in scientific methods of historical investigation. To this end meetings are held monthly in the History lecture room, at which papers, based on original research, are read and discussed. At present the Society is devoting its entire attention to the study of county history and to the collection of material bearing upon that subject. All members of the University are eligible for membership.

THE PHILOLOGICAL CLUB

EDWIN GREENLAW, Ph. D., *President*.

JOHN MANNING BOOKER, Ph. D., *Vice-President*.

OLIVER TOWLES, Ph. D., *Secretary*.

The Philological Club meets on the third Tuesday evening of each month during the college year. Its membership consists of the instructors and advanced students in the language departments of the University. The object of the Club is to stimulate original investigation in philology and to afford an opportunity for the interchange of views on subjects relating to such work. At each meeting papers are read and discussed. The Club publishes a journal of four issues a year whose contents are contributed by the members. All persons interested in the work of the Club are invited to attend its meetings.

DER DEUTSCHE VEREIN

The Verein was established for the purpose of stimulating interest among the officers and students of the University in German life. Weekly meetings are held throughout the year, at which the German language only is employed. Subjects of general interest pertaining to German literature, history, social life, and politics are informally discussed. An effort is made to provide students of German with an opportunity to perfect their pronunciation and to improve their control of the spoken language. It is part of the purpose of the Verein to arrange from time to time for public lectures in German. All officers and students of the University interested in the study of German are eligible to membership.

LE CERCLE FRANCAIS

WILLIAM MORTON DEY, Ph. D., *President*.

OLIVER TOWLES, Ph. D., *Permanent Secretary*.

Le Cercle Francais holds weekly meetings at which topics of general interest pertaining to French literature, and French life, manners and customs are discussed. The French language is employed exclusively. It is the aim of the club to stimulate interest in the French language, to provide its members with an opportunity to hear idiomatic French spoken, and to use the language with more facility. All officers and students of the University interested in the study of French are eligible to membership.

MUSICAL ASSOCIATION

PRESTON EPPS, *President*.

J. T. PRITCHETT, *Business Manager*.

The aim of the association is to foster the love of music and to afford opportunity of instruction to those interested in music. The organization consists of an orchestra, a brass band, a mandolin and a glee club, which are representative of the musical talent of the University.

THE NORTH CAROLINA CLUB

E. C. BRANSON, M. A., *President*.

FRANK P. GRAHAM, A. B., *Secretary*.

E. R. RANKIN, A. M., *Treasurer*.

J. G. DER. HAMILTON, Ph. D., *Chairman Steering Committee*.

W. P. FULLER, *Chairman Publicity Committee*.

The North Carolina Club was organized September 25, 1914, in Gerrard Hall. Its purpose is to review, interpret and discuss the economic and social problems of the State. These problems are being explored, county by county, by the County Clubs of the University student body. The scope and details of this volunteer work are set forth in The University Extension Bulletin, No. 9, under the title, Home-County Club-Studies. Every other Wednesday night throughout the college year, the results of the county club studies come before the North Carolina Club

for discussion and debate. The Carolina Club fills a column in the University News Letter every week. The final aim of the county clubs is a brief bulletin upon the economic and social problems of every county in the State.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

University of North Carolina Branch

PARKER HAYWARD DAGGETT, S. B., *President*.

JOHN WESLEY McIVER, S. B., *Secretary*.

The aim of the Branch is to stimulate interest in modern problems in the various fields of electrical engineering, to provide a means for students to discuss in public various questions of technical nature and to give them an opportunity for practice in thinking on their feet. The Branch meets monthly on the second Friday. The papers consist of original discussions and abstracts of papers presented before the regular Institute meetings. Membership in the Branch is open to all students who are interested in electrical engineering, and all enrolled members receive the regular monthly Proceedings of the Institute.

STUDENT GOVERNMENT

The Student Council

G. W. EUTSLER, *President*, President of the Senior Class.

McDANIEL LEWIS, *Secretary*, President of the Junior Class.

E. L. MACKIE, President of the Sophomore Class.

G. C. SINGLETARY, President of the Second Year Medical Class.

ROGER McDUFFIE, President of the Second Year Pharmacy Class.

B. C. TROTTER, Representative from the Law Class.

W. P. FULLER, (elected by Council) Representative from the Senior Class.

A. R. NEWSOM, Representative from the Student Body at Large.

The University Council is the head of the honor system. It is the concrete expression of the moral University, the student instrument of self-government. Its members being elected of the students by the students, it is grounded upon, and gives expression to, student sentiment. The Council is not an organ-

ization of policemen, nor is it based upon a system of espionage. When any student is felt by his fellow students to be unworthy to remain in the University, the Council takes cognizance of this feeling. It examines the matter, finds the facts in the case, and decides upon the justice of that feeling. If the student is found guilty of conduct unworthy of a University man, he is requested by the Council to leave the University. For example, if it becomes known among the students that a man has been guilty of cheating upon examination, he is disgraced in the eyes of the University community; and the students without hesitation, through their organ of expression, the Council, demand that he forthwith leave the University. The student sentiment expresses itself in this way not only in case of so flagrant a violation of the honor system as cheating, but also in cases of continued drunkenness, gambling, and such other forms of misconduct. Thus it can be seen that the student body has an effective system of self-government, that the motive power of this self-government is student sentiment, and that the organ of expression of this sentiment is the University Council.

The Greater Council

As a natural stage in the development of student government the Greater Council came into existence. The University Council confines its activities to questions relating to discipline. But there are other problems touching the general welfare that need attention. In response to this evident need the Greater Council was organized in 1912-13. It is composed of the University Council, eight men, and in addition two representatives from each academic class, and one representative each from the Graduate, Law, Medical, and Pharmacy Schools, making in all twenty members. The Greater Council holds stated meetings at which it discusses campus problems and projects plans for constructive work. Constantly there arise questions that seem to be the direct concern of no particular class or organization. To all such general questions the Greater Council turns its attention. It has attempted all sorts of tasks,—from improving social conditions on the campus to undertaking and carrying to successful termination a State-wide interscholastic high school track meet. It has come to be an important part of the system of student government. The Greater Council this year is composed of the following

members: G. W. Eutsler, *ex-officio president*; O. C. Nance, *secretary*; W. P. Fuller, A. R. Newsom, B. L. Field, McDaniel Lewis, F. F. Bradshaw, G. M. Long, E. L. Mackie, W. R. Allen, Jr., Oliver Rand, B. C. Trotter, T. G. Trenchard, G. C. Singletary, DeWitt Kluttz, Roger McDuffie, Fred Patterson, C. G. Tennent, J. C. Tayloe.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION

WALTER P. FULLER, *President*.

THOMAS C. BOUSHALL, *Vice-President*.

ROBERT B. HOUSE, *Treasurer*.

FRANCIS O. CLARKSON, *Secretary*.

FRANK P. GRAHAM, *General Secretary*.

J. A. WARREN, *Advisory Treasurer*.

The University Young Men's Christian Association, with its centrally located House as a meeting place and home for the students; with its work for new students; with its social receptions; with its annually published handbook and directory; with its lyceum course; with its support of eight Sunday schools; with its self-help department; with its semi-weekly religious meetings; with its ministerial and missionary clubs; with its large enrollment of men in Bible and mission study, the Young Men's Christian Association through these channels is an organized agency for usefulness and an aggressive force for morality in the University life.

However, "the Young Men's Christian Association may not be viewed," says a member of the faculty, "merely as an institution for the conduct of mission work, Bible study and religious meetings. Besides these excellent works which it shares with the churches, it is unique as a democratic student organization wholly given up to solving problems of right living. Its energy, sanity, and devotion have made it the most prominent and efficient organization in the college and the most beneficent influence in the life of the college community."

Cabinet

T. C. Boushall, Bible Study; J. M. Parker, Missions; G. W. Eutsler, Book Exchange; F. O. Clarkson, Religious Meetings;

W. C. Rymer, Negro Work and Night School; F. F. Bradshaw, Rural Work and Corn Club; Marion Fowler, Industrial; Harry Renn, Boy Scouts; Claude Boseman, Music; Fred McCall, Publicity; J. S. Bryan, Lyceum; L. H. Edwards, Self-help; T. C. Linn, Membership; T. A. Jones, Jr., Lost and Found; C. E. Ervin, New Students; Roger McDuffie, Information Bureau; Hoke Black, Barnett Fund; R. B. House, Finance.

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COMMENCEMENT
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SCHEDULES
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ONE HUNDRED AND NINETEENTH COMMENCEMENT

Sunday, May 31

BACCALAUREATE SERMON

The Reverend Edgar P. Hill, D. D.

SERMON BEFORE THE YOUNG MEN'S CHRISTIAN ASSOCIATION

The Reverend Richard W. Hogue

Monday, June 1

SENIOR SPEAKERS

John Albert Holmes

Frank Redding Owen

Lemuel Roy Johnston

Elbert Sidney Peel

Tuesday, June 2

ALUMNI EXERCISES

Reunions of the Classes 1864, 1889, 1894, 1904, 1909, 1913

THE ALUMNI ADDRESS

Judge Augustus Van Wyck

THE DEBATE BY REPRESENTATIVES FROM THE DIALECTIC AND PHILANTHROPIC
LITERARY SOCIETIES

Dialectic

Philanthropic

George Willard Eutsler

Thomas Callendine Boushall

Grover Adlai Martin

Wade Kornegay

Wednesday, June 3

THE COMMENCEMENT ADDRESS

The Honorable William C. Redfield, LL. D.

DEGREES IN COURSE

Bachelors of Arts

Reynold Tatum Allen	Robert Law Lasley
Troy Monroe Andrews	Oscar Leach
Lewis Angel	James Grover Lee
Benjamin Franklin Aycock	Joseph Ira Lee
Isaac Mayo Bailey	Henry Cyrus Long, Jr.
Robert Loyd Brinkley	William Campbell Lord
Allyn Raymond Brownson	James Frank Love
John Scott Cansler	John William McIntosh
David Hill Carlton	Roy Bowman McKnight
Joseph Lenoir Chambers, Jr.	Frank Redding Owen
Collier Cobb, Jr.	Walter Rea Parker
Frank Davies Conroy	Elbert Sidney Peel
Willie Frontis Credle	Edwin Jerry Perry
Paul Clifford Darden	William Franklin Pitt
George Frank Drew	Lemuel Alexander Price
Macon Rush Dunnagan	James Turner Pritchett
James Eldridge	Anna Mariah Puett
John Gilmer Feezor	Jesse Forbes Pugh
Thomas Wiley Ferguson	Lucius Henry Ransom
John Robert Gentry	Ralph Alton Reed
Harry Barnette Grimsley	Melvin Robinson
Meade Hart	Kenneth Claiborne Royall
John Thomas Hatcher	Luther Vernon Scott
John Albert Holmes	Harold Thomas Sloan
James Eugene Holmes	Ralph Case Spence
Ralph Wendell Holmes	Isaac Richerson Strayhorn
Albert Warren James	George Vaughan Strong
Lemuel Roy Johnston	William Reid Thompson
Troy Isaiah Jones	Felix Litaker Webster
Donald George Kelly	William Pell Whitaker, Jr.
Daniel Lamont Knowles	Seymour Webster Whiting
Henry Stuart Kendall Willis	

Bachelors of Science in Chemical Engineering

Henry Leon Cox	Arthur James Flume
	James Arthur Struthers

Bachelor of Science in Civil Engineering

Hubert Walter Collins

Bachelors of Science in Electrical Engineering

Malcolm Norval Oates	Carl Duffy Taylor
	John Alfred Walker

Bachelors of Science in Medicine

Clayton Willard Eley	William Alexander Smith
James Gibson Pate	Lewis Holmes Swindell, Jr.
	Norman St. George Vann

Bachelors of Laws

Kenneth Raynor Ellington	Ezra Parker
	Walter Frank Taylor

Graduates in Pharmacy

Richard Homer Andrews	Kenneth Alexander Kirby
	James Edison Lytch

Masters of Arts

Karl Braswell Bailey	Edwin Jerry Perry
William Summey Coulter	Edgar Ralph Rankin
Thomas Wiley Ferguson	James Blaine Scarborough
Robert Craig Glenn	Richard Harvey Shuford
Edwin McKay Highsmith	Marshall Turner Spears
Joseph Henry Johnston	Henry Edward Taylor
James Lawrence Orr	Henry Roland Totten
Leslie Winston Pearson	Luther Carter Williams

Masters of Science

Carnie Blake Carter	Leland Brown Rhodes
Victor Aldine Coulter	William Augustus Rudisill

Doctors of Philosophy

James Talmage Dobbins	George Kenneth Grant Henry
	Homer Worthington Starr

HONORARY DEGREES

Doctors of Laws

W. R. Allen	Josephus Daniels
	William C. Redfield

MEDALS, PRIZES, AND FELLOWSHIPS

The William Cain Prize in Mathematics: W. S. Wicker.

The Eben Alexander Prize in Greek: R. B. House.

The Worth Prize in Philosophy: M. T. Spears.

The Early English Text Society Prize: J. M. Steadman, Jr.

The Henry R. Bryan Prize in Law: W. F. Taylor.

Prizes in North Carolina Colonial History: first, S. J. Ervin; second, J. R. Gentry.

The Callaghan Scholarship Prize in Law: W. F. Taylor.

The Babbitt Scholarship in Chemistry: D. H. Killefer.

The Le Doux Fellowship in Chemistry: C. B. Carter.

Fellowship in Chemistry: V. A. Coulter.

Fellowship in Organic Chemistry: V. C. Edwards.

Fellowship in Mathematics: W. S. Wicker.

The W. J. Bryan Prize in Political Science: R. H. Shuford.

The Ben Smith Preston Cup: W. P. Fuller.

The Freshman Prize in English: S. F. Telfair, Jr.

The Bingham Prize: T. C. Boushall.

The Mangum Medal: E. S. Peel.

Elected to membership in *Phi Beta Kappa Society*, 1914: A. R. Newsom, W. R. Taylor, C. A. Boseman, B. L. Field, R. G. Fitzgerald, E. Y. Keesler, W. P. M. Weeks.

CERTIFICATES

Education: J. G. Feezor, R. L. Lasley, J. I. Lee, L. H. Ranson, L. V. Scott.

English: D. H. Carlton, J. Eldridge, E. J. Perry.

History: I. M. Bailey.

STUDENTS (1914-1915)

Graduates

- Arnette, John Madison, Durham.
A. B., 1902, Wake Forest College. Philosophy, Economics, History. Candidate for Ph. D.
- Bates, Joel Ashford, St. Matthews, S. C.
B. S., 1912, Clemson College. English, Chemistry, Geology.
- Benbow, Charles Frank, East Bend.
A. B., 1914, Guilford College. Economics, History. Candidate for A. M.
- Bradshaw, George Washington, Ivor, Va.
B. S., 1908, Guilford College. Education, Physics.
- Brownson, Allyn Raymond, Asheville.
A. B., 1914. Geology, Botany. Candidate for A. M.
- Bryan, Paul Roby, Goldsboro.
S. B., 1913. Chemistry, Physics.
- Carter, Carnie Blake, Morganton.
S. B., 1913, S. M., 1914. Chemistry, Physics, Geology. Candidate for Ph. D.
- Cobb, Collier, Jr., Chapel Hill.
A. B., 1914. Mathematics, Electrical Engineering. Candidate for A. M.
- Collins, Hubert Walter, Holly Springs.
S. B., 1914. Mathematics, Drawing, Economics. Candidate for S. M.
- Coulter, Victor Aldine, Newton.
S. B., 1913, S. M., 1914. Chemistry, Physics. Candidate for Ph. D.
- Daniel, James Manly, Jr., Denton.
A. B., 1912. Economics, History, Philosophy. Candidate for A. M.
- Day, John Tucker, Walkertown.
Economics, Education. Candidate for A. B. and A. M.
- DeVault, Samuel Henry, Jonesboro, Tenn.
A. B., 1912, Carson-Newman College. Education, Rural Economics. Candidate for A. M.
- Dunnagan, Macon Rush, Yadkinville.
A. B., 1914. Economics, History, English. Candidate for A. M.
- Eason, Joshua Lawrence, Chapel Hill.
A. B., 1911. English, Philosophy. Candidate for A. M.
- Edwards, Victor Clyde, Ore Hill.
A. B., 1909. Chemistry, Physics, Geology. Candidate for Ph. D.
- Furr, Willis Caldwell, Hagerman, N. M.
A. B., 1914, East Texas Normal College. Education, Philosophy. Candidate for A. M.
- George, Wesley Critz, Mount Airy.
A. B., 1911, A. M., 1912. Zoology, Botany. Candidate for Ph. D.

- Hall, James Neal, Iowa Park, Tex.
A. B., 1914, East Texas Normal College. History, Economics. Candidate for A. M.
- Henry, Byron Vance, Lilesville.
A. B., 1912. English.
- Highsmith, James Albert, Greensboro.
A. B., 1910. Education, Economics, English. Candidate for A. M.
- Holder, Brantson Beeson, Candor.
Economics, Education. Candidate for A. B. and A. M.
- Jeffries, William Lewis, Chapel Hill.
A. B., 1910, A. M., 1912. Chemistry, Physics, Geology. Candidate for Ph. D.
- Lambert, Gabriel de Lono, High Point.
Economics, History, Philosophy. Candidate for A. B. and A. M.
- Lambert, Henry Dionysius, Chapel Hill.
Geology, Botany. Candidate for A. B. and A. M.
- Lasley, John Wayne, Jr., Burlington.
A. B., 1910, A. M., 1911. Mathematics, Physics. Candidate for Ph. D.
- Leonard, Edward Charles, Greensboro.
B. S., 1913, Earlham College. Geology, Botany. Candidate for S. M.
- McIver, John Wesley, Sanford.
S. B., 1913. Electrical Engineering, Civil Engineering, Chemistry. Candidate for S. M.
- McKay, Arnold Artemus, Maxton.
A. B., 1913. English, Education. Candidate for A. M.
- McKnight, Roy Bowman, Charlotte.
A. B., 1914. Physics, Chemistry, Zoology.
- McNeill, Lauchlin, Chapel Hill.
B. S., 1906, Davidson College. Philosophy, Economics. Candidate for A. M.
- Maxwell, Baldwin, Charlotte.
English, French, Philosophy. Candidate for A. B. and A. M.
- Moore, Carlos Monroe, Wolfe City, Texas.
A. B., 1914, East Texas Normal College. Economics, Education. Candidate for A. M.
- Moss, William Dygnum, Chapel Hill.
A. B., 1890, McGill University. Philosophy, Geology.
- Oates, Malcolm Norval, Charlotte.
S. B., 1914. Electrical Engineering, Chemistry, English. Candidate for S. M.
- Parker, Roscoe Edward, Selma.
English, French, Education. Candidate for A. B. and A. M.
- Parker, Walter Rea, Goldsboro.
A. B., 1914. Philosophy, Education, Economics. Candidate for A. M.
- Patten, Walter, Chapel Hill.
A. B., 1907, Wesleyan University. Rural Economics.
- Price, Thomas Moore, Madison.
A. B., 1912. Mathematics, Electrical Engineering. Candidate for S. B. in Civil Engineering.

- Riggs, Oliver Leonidas, Carrboro.
A. B., 1913, Wake Forest College. Philosophy, Economics, History.
- Rudisill, William Augustus, Henry River.
S. B., 1911, S. M., 1914. Chemistry, Electrical Engineering, Geology. Candidate for Ph. D.
- Seckinger, Daniel Lamont, Rincon, Ga.
A. B., 1913, Lenoir College. English. Candidate for Ph. D.
- Smith, William Robert Lee, Chapel Hill.
B. A., 1871, Cumberland University. Philosophy.
- Sullivan, Ralph Alexander, Pinnacle.
A. B., 1911, Wake Forest College. Chemistry, Geology, Mathematics.
- Thornton, Richard Hurt, Blackstone, Va.
A. M., 1914, Columbia University. English.
- Totten, Henry Roland, Yadkin College.
A. B., 1913, A. M., 1914. Botany. Candidate for Ph. D.
- Wicker, Walton Staley, Elon College.
A. B., 1913, Elon College. Mathematics, Drawing, Electrical Engineering. Candidate for S. B. in Civil Engineering.
- Woodall, Charles Lawrence, Jr., Raleigh.
A. B., 1913, Wake Forest College. Physics, Electrical Engineering, Economics. Candidate for A. M.
- Wright, Nathaniel, Chapel Hill.
Latin, English, Education. Candidate for A. B. and A. M.
- Yoder, Fred Roy, Hickory.
A. B., 1910, Lenoir College. Economics, History, Philosophy. Candidate for A. M.

Senior Class

- | | | |
|------------------------------|-------|-----------------|
| Bailey, Kenneth Hubert, | Arts, | Wakefield. |
| Bell, Daniel Long, | Arts, | Graham. |
| Blackstock, Clarence Ernest, | Arts, | Weaverville. |
| Boseman, Claude Alfred, | Arts, | Enfield. |
| Boushall, Thomas Callendine, | Arts, | Raleigh. |
| Bryan, Joseph Shepard, | Arts, | Scott's Hill. |
| Campbell, Edgar Thomas, | Arts, | Jessama. |
| Carr, Austin Heaton, | Arts, | Durham. |
| Clarke, Wilfong Waldron, | Arts, | Morganton. |
| Conrad, Edwin Fuller, | Arts, | Winston-Salem. |
| Conrad, Howard Clarence, | Arts, | Pfafftown. |
| Cummings, Alfred Ewing, | Arts, | Winston-Salem. |
| Cuthrell, Hugh Hamlin, | Arts, | Winston-Salem. |
| Day, John Tucker, | Arts, | Walkertown. |
| Edgerton, Early Dock, Jr., | Arts, | Fremont. |
| Edgerton, Gurney Edvertt, | Arts, | Fremont. |
| Ervin, Carl Edgar, | Arts, | Troutmans. |
| Eutsler, George Willard, | Arts, | University, Va. |

Field, Bascom Lee,	Science,	Greensboro.
Fitzgerald, Robert Greeson,	Arts,	Whitsett.
Foust, Henry Price,	Arts,	Greensboro.
Fuller, Walter Pliny,	Arts,	Bradentown, Fla.
Gaither, Alfred Long,	Arts,	Statesville.
Goode, Seddon, Jr.,	Arts,	Clinton.
Gunter, Laughton Bruce,	Arts,	Holly Springs.
Harden, Graham,	Arts,	Burlington.
Harding, William Renny,	Arts,	Yadkinville.
Harris, Donald Ryan,	Arts,	Arden.
Hill, Thomas Fuller,	Arts,	Durham.
Holder, Brantson Beeson,	Arts,	Candor.
Holton, George Ricks,	Arts,	Winston-Salem.
Johnston, Charles Louis,	Arts,	Knoxville, Tenn.
Keesler, Edward Yates,	Arts,	Charlotte.
Kerr, William Clarke Doub,	Arts,	Greensboro.
Killeffer, David Herbert,	Science,	Bradentown, Fla.
Kornegay, Wade,	Arts,	Chapel Hill.
Lambert, Gabriel de Lono,	Arts,	High Point.
Lambert, Henry Dionysius,	Arts,	Chapel Hill.
Lilly, Edmund Jones, Jr.,	Science,	Fayetteville.
Lynch, Rachel,	Arts,	Chapel Hill.
B. P., 1913, North Carolina State Normal and Industrial College.		
McCall, Frederick Bays,	Arts,	Charlotte.
Mallett, James Reginald,	Arts,	Chapel Hill.
Manning, Frederick Cain,	Arts,	Raleigh.
Martin, Grover Adlai,	Arts,	East Bend.
Maxwell, Baldwin,	Arts,	Charlotte.
Mebane, Banks Holt,	Arts,	Greensboro.
Mebane, George Allen, Jr.,	Arts,	Greensboro.
Millender, Charles White,	Arts,	Asheville.
Nance, Ophir Carmal,	Arts,	High Point.
Newsom, Albert Ray,	Arts,	Marshville.
Parker, Roscoe Edward,	Arts,	Selma.
Paty, B. F.,	Arts,	Tullahoma, Tenn.
Pickett, Oscar Asa,	Science,	Durham.
Price, James Valentine, Jr.,	Arts,	Madison.
Pritchard, William Nelson, Jr.,	Science,	Chapel Hill.
Pruden, William Dossey, Jr.,	Arts,	Edenton.
Reid, William Kirkpatrick,	Arts,	Gastonia.
Robinson, Clarence,	Arts,	Atlantic.
Rowe, Joseph Vance,	Arts,	Aurora.
Sahag, Leon Maroot,	Science,	Teheran, Persia.
Scott, Samuel Floyd,	Arts,	Haw River.
Sisk, Hudson Claude,	Arts,	Waco.

Sloan, Charles Austin,	Arts,	Garland.
Smith, Claiborne Thweatt,	Arts,	Scotland Neck.
Stanford, William Raney,	Arts,	Teer.
Stone, Alma Irene,	Arts,	Chapel Hill.
A. B., 1914, Meredith College.		
Taylor, George Frederick,	Arts,	Norwood.
Taylor, William Raymond,	Arts,	Louisburg.
Weatherly, Albert Thomas,	Arts,	Gorman.
Weaver, James Ralph,	Arts,	Chapel Hill.
Weeks, Willie Person Mangum,	Arts,	Washington, D. C.
Whitaker, Zack Lanier,	Arts,	Oak Ridge.
White, Paul Linwood,	Arts,	Scotland Neck.
Whitfield, James Vivian,	Arts,	Wallace.
Wilkins, John Allen,	Arts,	Linden.
Woltz, Claude Bernard,	Arts,	Dodson.
Woollcott, Philip,	Arts,	Salisbury.
Wright, Nathaniel,	Arts,	Chapel Hill.

Junior Class

Allen, Herbert Edwin,	Science,	Asheville.
Allred, Joseph Henry,	Arts,	Mount Airy.
Anderson, Andrew Vance,	Arts,	Eagle Rock.
Auld, Benjamin Franklin,	Arts,	Baltimore, Md.
Bailey, Herbert Victor,	Arts,	Neuse.
Black, Hoke Barrymore,	Arts,	Greenville, S. C.
Blaine, James Cornaro,	Arts,	Franklin.
Blalock, Hubert Morse,	Arts,	Raleigh.
Blount, Ferral Leighton,	Science,	Bethel.
Blue, Luther Avon, Jr.,	Arts,	Wilmington.
Borden, Edwin Brownrigg, Jr.,	Arts,	Goldsboro.
Bradshaw, Francis Foster,	Arts,	Hillsboro.
Capehart, William Jonathan,	Arts,	Roxobel.
Castelloe, Allen Thurman,	Arts,	Aulander.
Clarkson, Francis Osborne,	Arts,	Charlotte.
Cobb, William Borden,	Arts,	Goldsboro.
Cooper, Frank Hodges,	Arts,	Washington.
Cooper, George Herman,	Arts,	China Grove.
Crouse, Rush Floyd,	Arts,	Nile.
Daniel, Charles Rufus,	Arts,	Weldon.
Darden, Douglas Beaman,	Arts,	Fremont.
Davis, Martin Jones,	Arts,	Warrenton.
Deaton, Fred Hyams,	Arts,	Statesville.
Dobbins, Charles Nelson,	Arts,	Yadkinville.
Dysart, John Overton,	Arts,	Lenoir.

Edwards, Lee Henry,	Arts,	Holly Springs.
Egerton, Graham Burwell,	Arts,	Louisburg.
Elliott, Aubrey McCoy,	Arts,	Columbia, S. C.
Epps, Preston Herschel,	Arts,	Durham.
Farmer, Leslie James,	Arts,	Wilson.
Fore, Clyde Lathrop,	Science,	Charlotte.
Fulcher, Manly,	Arts,	Atlantic.
Goldston, Walter Leon, Jr.,	Arts,	Goldston.
Hall, Lucius Coleman,	Science,	Webster.
Hardison, James Archibald,	Arts,	Wadesboro.
Harper, Allen Bostick,	Arts,	Chapel Hill.
Harper, William Troy,	Science,	Chapel Hill.
Harris, Joseph Johnson,	Arts,	Louisburg.
Harrison, James Leftwich,	Arts,	Raleigh.
Hester, Hugh Bryan,	Arts,	Hester.
Hill, Frank Armfield,	Arts,	Statesville.
Holland, Curtis Avent,	Arts,	Greensboro.
Homewood, Roy McRae,	Science,	Burlington.
House, Robert Burton,	Arts,	Thelma.
Hudson, Hinton Gardner,	Arts,	Smithfield.
Huske, John Manning,	Arts,	Fayetteville.
Huske, Joseph Strange,	Arts,	Fayetteville.
Huske, William Oliver,	Science,	Fayetteville.
Jarrell, John Franklin,	Arts,	Chapel Hill, Tenn.
Jernigan, Herman,	Arts,	Benson.
Johnson, Herschel Vespasian,	Arts,	Charlotte.
Jones, John Haywood,	Arts,	Newbern.
Joyner, William Henry,	Science,	Princeton.
Kent, John Archelaus,	Arts,	Lenoir.
Lee, Charles Dennis,	Arts,	Faison.
Lewis, McDaniel,	Arts,	Kinston.
Linn, Thomas Calvin, Jr.,	Arts.,	Salisbury.
Long, Giles Mebane,	Arts,	Charlotte.
Loughran, George Barnes,	Arts,	Asheville.
McGee, Vann Ward,	Arts,	Leicester.
Marsh, Luther Grier,	Arts,	Marshville.
Merritt, Oscar von Kochtitzky,	Science,	Mount Airy.
Miller, Harry,	Arts,	Stony Point.
Miller, Mary Scales,	Arts,	Chapel Hill.
Moore, James Roy,	Arts,	Lenoir.
Morris Carlyle,	Arts,	Fremont.
Norris, Frank Wisconsin,	Arts,	Jacksonville, Fla.
Page, Robert Newton, Jr.,	Arts,	Biscoe.
Parker, John Merrell,	Arts,	Bradentown, Fla.

Patterson, Hazel,	Science,	Burlington.
Pell, William Edward,	Arts,	Raleigh.
Pike, Samuel Clark,	Arts,	Liberty.
Pitts, William Barney,	Arts,	Charlotte.
Proctor, William Isaac,	Arts,	Raleigh.
Reid, Edward Solomon, Jr.,	Science,	Charlotte.
Robinson, Marius Emmett, Jr.,	Arts,	Goldsboro.
Royall, George Claiborne, Jr.,	Arts,	Goldsboro.
Royster, Beverly Sampson, Jr.,	Arts,	Oxford.
Ruffin, Thomas White,	Arts,	Louisburg.
Schulken, James Bion, Jr.,	Arts,	Whiteville.
Shapiro, Moses,	Arts,	Winston-Salem.
Shrago, Jacob Philip,	Arts,	Goldsboro.
Shuford, Norman Clifford,	Arts,	Fairview.
Siddall, Roger Shore,	Arts,	Sumter, S. C.
Smith, Cleveland Lafayette,	Arts,	Indian Trail.
Smith, George Wallace,	Science,	Wilmington.
Smith, Hubert McCree,	Arts,	Hendersonville.
Smith, William Oliver,	Arts,	Raleigh.
Spain, Drury Spruill,	Arts,	Greenville.
Temko, Herman Beryl,	Science,	Greensboro.
Thorp, Adam Treadwell,	Arts,	Rocky Mount.
Umstead, William Bradley,	Arts,	Bahama.
Vaughn, Robert Candler,	Arts,	Winston-Salem.
Walke, William Capehart,	Science,	Avoca.
Welch, Robert Henry Winborne, Jr.,	Arts,	Hertford.
Whitfield, Lewis Evander,	Science,	Clinton.
Williams, Marshall McDairmid,	Science,	Faison.
Wood, Fred Phillips,	Arts,	Edenton.

Sophomore Class

Allen, William Reynold, Jr.,	Arts,	Goldsboro.
Allred, Frank Ewing,	Science,	Aberdeen.
Aronson, Arthur Aaron,	Arts,	Raleigh.
Austin, William Bryant,	Arts,	Laurel Springs.
Bacon, Edward Onslow,	Science,	Newton.
Baggett, Venon,	Arts,	Salemburg.
Bain, Charles Wortley,	Arts,	Chapel Hill.
Baity, Herman Glenn,	Arts,	Harmony.
Barber, Lawrence Corbin,	Science,	Asheville.
Barnard, James Carl,	Arts,	Franklin.
Barnes, Rudolph,	Arts,	Clayton.
Barnes, Troy Thomas,	Arts,	Lucama.
Barnes, William Braddy,	Arts,	Lucama.

Bourne, Francis Churchill,	Arts,	Asheville.
Brooks, Robert Plato,	Science,	Woodsdale.
Capps, James Arthur,	Arts,	Bessemer City.
Carmichael, Whitfield Chapman, Jr.,	Arts,	Asheville.
Carter, David Vance,	Arts,	Liberty.
Coble, Charles Benjamin,	Arts,	Burlington.
Combs, Alvah Haff,	Arts,	Columbia.
Cowan, James Gerald,	Arts,	Asheville.
Crawford, Farrell Moffatt,	Arts,	Cornelia, Ga.
Crawford, Karl Brooks,	Science,	Marion.
Crowell, Gordon Bryan,	Arts,	Lincolnton.
Dail, Ernest James,	Arts,	Kenansville.
Dalton, Wilson Bitting,	Arts,	Winston-Salem.
Dobbin, Edgar Alexander,	Arts,	Legerwood.
Duncan, Early Edward Walters,	Arts,	Woodsdale.
Eagle, Daniel Eugene,	Arts,	Statesville.
Edwards, David Nesbit,	Arts,	Ronda.
Eldridge, John Grady,	Arts,	Bentonville.
Elias, Miguel Grausman,	Science,	Raleigh.
Elsom, Floyd Howard,	Science,	Hendersonville.
Ervin, Samuel James, Jr.,	Arts,	Morganton.
Ferguson, Clyde Vestal,	Arts,	Teer.
Folger, Carl Louis,	Arts,	Dobson.
Fowler, Marion Butler,	Arts,	Durham.
Funderburk, Kemp,	Arts,	Monroe.
Ginn, Russell Leonard,	Arts,	Goldsboro.
Goforth, Osborne LeRoy,	Arts,	Durham.
Gryder, Coffey Harlan,	Arts,	Taylorsville.
Gwaltney, Leroy Parks, Jr.,	Arts,	Hiddenite.
Hale, Joseph Watkins,	Science,	Louisburg.
Hardesty, William Joseph,	Arts,	Harlowe.
Hardison, Joseph Hammond,	Arts,	Fayetteville.
Harper, Henry Green, Jr.,	Arts,	Charlotte.
Harrell, Beemer Clifford,	Arts,	Marshville.
Harris, Charles Spurgeon,	Arts,	Sulphur Springs.
Harris, Julian Earle,	Arts,	Henderson.
Harriss, Robert Burton,	Arts,	Greensboro.
Higgins, Charles William,	Science,	Greensboro.
Hill, John Bright,	Arts,	Warsaw.
Hill, William Francis,	Science,	Jersey City, N. J.
Hobbs, Samuel Huntington, Jr.,	Arts,	Clinton.
Hodgin, Samuel Clarence,	Arts,	Randleman.
Hogan, Ernest Glen,	Arts,	Chapel Hill.
Holbrook, John McCraven,	Arts,	Huntersville.

Holloway, Jackson Kenneth,	Arts,	Raleigh.
Hoover, James Earle,	Science,	Greensboro.
Horsfield, Basil Tourneur,	Science,	Oxford.
Howell, William Frederick,	Arts,	Goldsboro.
Hunt, Edward Outlaw,	Arts,	Oxford.
Hunter, Henry Grimmett,	Arts,	Hendersonville.
Hunter, Wade Russell,	Arts,	Alexander.
Hyatt, Carl Britt,	Arts,	Burnsville.
Ingram, Hal Burkhead,	Science,	High Point.
Isley, Roy Bynum,	Science,	Burlington.
Johnson, John Gray,	Science,	Lynchburg, Va.
Johnston, James Martin,	Arts,	Chapel Hill.
Jones, Eugene Patterson,	Arts,	Lenoir.
Jones, Jesse Weimar,	Arts,	Franklin.
Jones, Thomas Atkinson, Jr.,	Arts,	Asheville.
Jones, Zebulon Baird Vance,	Arts,	Swan Quarter.
Jordan, Francis Cameron,	Arts,	Greensboro.
Joyner, Edward Grey,	Arts,	Littleton.
Kendall, Everett Allan,	Arts,	Pleasant Garden.
Kendrick, Frank Erwin,	Arts,	Dillon, S. C.
Kendrick, Garrie Lee,	Science,	Cherryville.
King, James Edwin,	Arts,	Pelham.
Kirk, William Wilson,	Arts,	Jacksonville, Fla.
Kirksey, James Jackson,	Arts,	Morganton.
Lindau, Alfred Milton,	Arts,	Greensboro.
McCurry, Clifford Handy,	Arts,	Day Book.
Mackie, Ernest Loyd,	Arts,	Yadkinville.
Mann, George Weaver,	Arts,	Prentiss.
Markham, Blackwell,	Arts,	Durham.
Marlowe, William Anderson,	Science,	Walstonburg.
Miller, Clyde Caswell,	Arts,	Blowing Rock.
Mock, Henry Bascom,	Arts,	Pfafftown.
Monroe, William Galpin,	Science,	Wilmington.
Nims, Frederick Boyden, Jr.,	Arts,	Mount Holly.
O'Brien, Earl James,	Science,	Durham.
Parker, George Farrar,	Arts,	Asheville.
Patton, James Ralph, Jr.,	Arts,	Durham.
Peirce, John Miller,	Arts,	Warsaw.
Perdew, John William,	Arts,	Wilmington.
Perry, Ely Jackson,	Arts,	Kinston.
Phillips, John William,	Science,	Sanford.
Pickard, Minna Thelma,	Arts,	Chapel Hill.
Polk, William Tannahill,	Arts,	Warrenton.
Porter, Thurman Allen,	Arts,	Kernersville.

Proctor, Edward Knox,	Arts,	Lumberton.
Quevedo, Manuel Gonzales,	Science,	Union de Reyes, Cuba.
Ramsay, James Graham,	Arts,	Salisbury.
Rand, Oliver,	Arts,	Smithfield.
Randolph, Marion Herbert,	Arts,	Charlotte.
Ranson, John Oliver,	Arts,	Huntersville.
Ratcliff, Zeno Olen,	Science,	Pantego.
Rawlings, Lenox Daniel,	Science,	Wilson.
Reasoner, Norman Anderson,	Arts,	Oneco, Fla.
Reed, Walter Marion,	Arts,	Fairview.
Renn, Harry Jackson,	Arts,	Oxford.
Royster, David Wyeth,	Arts,	Shelby.
Rudisill, John Arvie,	Science,	Henry River.
Rymer, William Cecil,	Arts,	Hendersonville.
Shamburger, Frank Dudley,	Arts,	Biscoe.
Sharpe, Howard D.,	Arts,	Stony Point.
Shipp, Fabius Busbee,	Arts,	Raleigh.
Siddall, Bernard Andrew,	Arts,	Sumter, S. C.
Sloan, Clyde Neely,	Science,	Charlotte.
Sloan, Carter Siler,	Science,	Franklin.
Slover, George,	Science,	Newbern.
Smith, George Blackwell, Jr.,	Science,	Capron, Va.
Smith, Joseph Elmer,	Science,	Wilson.
Smith, Paul Faison,	Arts,	Raleigh.
Smithey, Sherman Bryan,	Arts,	Wilkesboro.
Sparger, Randall Worth,	Science,	Mount Airy.
Squires, Claude Babbington,	Science,	Charlotte.
Stedman, John Porterfield, Jr.,	Science,	Oxford.
Stell, John Spencer,	Arts,	Raleigh.
Stevens, Henry Leonidas, Jr.,	Arts,	Warsaw.
Strange, Thomas Wright,	Science,	Wilmington.
Suddreth, Willis Clyde,	Arts,	Lenoir.
Tandy, George Wendell,	Science,	Jacksonville, Ill.
Taylor, William Grimsley,	Science,	Greensboro.
Teague, Everette Simon,	Arts,	Taylorsville.
Telfair, Samuel Fowle, Jr.,	Arts,	Raleigh.
Tennent, George Raby,	Science,	Asheville.
Thompson, Charles Aycock,	Arts,	Goldsboro.
Thorp, Lewis Sumner,	Science,	Rocky Mount.
Toxey, Ray Sawyer,	Arts,	Elizabeth City.
Travis, Edward Llewellyn, Jr.,	Arts,	Halifax.
Valley, Leland Francis,	Arts,	Charlotte.
Wall, Frank Privette,	Arts,	Wendell.
Wall, George Collins,	Science,	Hillsboro.

Warrick, Edward,	Arts,	Sioux.
Watkins, Robert Young,	Arts,	Thomasville.
Watson, William Randolph, Jr.,	Arts,	Darlington, S. C.
Wellons, Wilbert Freeman,	Arts,	Selma.
Williams, Macon McCorkle,	Science,	Newton.
Williams, Virginius Faison,	Arts,	Faison.
Williamson, Allen Davidson,	Science,	Asheville.
Wilson, John Nestor, Jr.,	Arts,	Greensboro.
Wilson, John Thomas,	Arts,	Rural Hall.
Wooten, Floyd Pugh,	Science,	Kinston.
Wright, James Thomas Carr,	Arts,	Hunting Creek.
Wright, Robert Hazlehurst, Jr.,	Arts,	Nashville, Tenn.
Wright, Theodore Oran,	Arts,	Pleasant Garden.
Wright, William Cullen, Jr.,	Arts,	Winston-Salem.
Wyatt, Arthur Thomas,	Science,	Raleigh.

Freshman Class

Abelkop, Isidor Meyer,	Arts,	Durham.
Adams, Clarence Leonidas,	Science,	Holly Springs.
Allen, Claude William,	Arts,	Creedmore.
Andleton, Allan Wills,	Arts,	Weldon.
Andrews, Claud Fieming,	Arts,	High Point.
Andrews, Ezra Preston,	Science,	Charlotte.
Andrews, Ralph Preston,	Arts,	Chapel Hill.
Applewhite, Eric Leon,	Arts,	Wilson.
Armstrong, Roy,	Arts,	Belmont.
Arnold, Duma Carroll,	Science,	Neuse.
Bailey, William, Jr.,	Arts,	Louisburg.
Baker, Maurice Edward,	Arts,	Lawndale.
Ballew, Ralph Dewey,	Science,	Hickory.
Banks, Hubert Cyrus,	Arts,	Grantsboro.
Banner, Allan Carithers,	Science,	Mount Airy.
Barton, Russell Pratt,	Arts,	Hartford, Conn.
Battle, Hyman,	Science,	Rocky Mount.
Bell, Clifton Linwood,	Arts,	Swan Quarter.
Bell, Eric Franklin,	Arts,	Dunn.
Black, Hugh Clifton,	Arts,	Greenville, S. C.
Bolick, Clarence Pinkney,	Science,	Morganton.
Bowen, Howard Wiswall, Jr.,	Arts,	Washington.
Bowers, William Jesse,	Arts,	Washington.
Boyett, Clenon Festus,	Arts,	Smithfield.
Boyst, William Marshall,	Science,	Greensboro.
Brake, Richard Ralph,	Arts,	Rocky Mount.
Bridges, Roy,	Science,	Yazoo City, Miss.

Brookshire, John Voorhees,	Arts,	Biltmore.
Bryant, Victor Silas, Jr.,	Arts,	Durham.
Buchanan, Harry Eugene,	Arts,	Sylva.
Burgess, William Grady,	Arts,	Shelby.
Burnett, Robert Shepard,	Science,	Wilmington.
Butt, Israel Harding,	Arts,	Hope Mills.
Butt, Jesse Robanson,	Arts,	Bonnerton.
Cadelle, John Ray,	Arts,	Maxton.
Chapman, Leicester,	Science,	Asheville.
Churchill, Guy Willard,	Science,	Kinston.
Clark, William Clarence,	Arts,	Chapel Hill.
Coates, Albert McKinly,	Arts,	Smithfield.
Cobb, Thomas Kesler,	Science,	St. Paul.
Coburn, Alonzo Fleet,	Arts,	Jamesville.
Cohn, Frederick Jacob,	Science,	Newbern.
Cole, Bennett Columbus,	Arts,	High Rock.
Conger, Joseph Harold,	Science,	Edenton.
Conyers, William Priestly,	Arts,	Greenville, S. C.
Cooper, Elliott Tunstall,	Arts,	Oxford.
Councill, Gordon Stuart,	Arts,	Hickory.
Cowell, Horace Baxter,	Science,	Washington.
Cox, Harvey Atkinson,	Arts,	Southern Pines.
Craig, Thomas James,	Arts,	Monroe.
Crane, William Thurston,	Science,	Hendersonville.
Crissman, Curtis Franklin,	Arts,	Siloam.
Crowell, Rupert Johnson,	Arts,	Acton.
Currie, Claude,	Arts,	Candor.
Currie, Wilbur Hoke,	Arts,	Carthage.
Cutchin, Josiah,	Arts,	Chapel Hill.
Dail, George Robert,	Arts,	Kenansville.
Dale, Thomas Richard,	Arts,	Morganton.
Davis, Charles Walker,	Arts,	Hillsboro.
Deaton, Frank,	Arts,	Statesville.
Denning, Wade Fulton,	Science,	Albemarle.
de Rossett, Robert Cowan,	Arts,	Wilmington.
Dewar, William Banks,	Science,	Raleigh.
Dimmick, Graham Bennett,	Arts,	Sanford.
Dixon, George Brownrigg,	Arts,	Edenton.
Duncan, Elliott Florence,	Arts,	Mayodan.
Durham, John Franklin,	Arts,	Charlotte.
Eagle, Watt Weems,	Arts,	Statesville.
Eaton, Paul Blaine,	Arts,	Yadkinville.
Edney, Calvin Ransome,	Arts,	Mars Hill.
Edwards, John Robert,	Arts,	Ore Hill.

Ellis, Hubert Oscar,	Arts,	Washington.
Erwin, William Allen, Jr.,	Arts,	Durham.
Farthing, Fred Robert,	Arts,	Boone.
Faucette, Holt Pebbin,	Science,	Grimesland.
Flack, Charles Zorah,	Science,	Forest City.
Fonvielle, John Hadley,	Arts,	Warsaw.
Foreman, Thomas Alexander,	Science,	Albemarle.
Fuller, Frank Webb,	Arts,	Lenoir.
Fuquay, Daniel Long,	Science,	Durham.
Gallant, Alexander Gary,	Arts,	Charlotte.
Gant, Cecil,	Science,	Burlington.
Gay, Archibald Cree,	Arts,	Jackson.
Gibbs, Henry Sylvester,	Arts,	Oriental.
Giles, Isaac Viles,	Science,	Fonta Flora.
Goley, Willard Coe,	Arts,	Graham.
Goode, Henry Grady,	Arts,	Connelly Springs.
Graham, Gregory Nowell,	Science,	Winston-Salem.
Gray, William Alexander,	Arts,	Wadesboro.
Green, James Columbus,	Science,	Roberdel.
Gregory, William Herbert,	Arts,	Stovall.
Griffin, Elbert Alonzo,	Science,	Goldsboro.
Grimes, Ira Kimbrough,	Arts,	Lexington.
Groves, Earl Elmer,	Arts,	Gastonia.
Groves, Lawrence Craig,	Arts,	Gastonia.
Groves, William Boone,	Science,	Newbern.
Gudger, Henry Clarence,	Science,	Asheville.
Gwynn, John Minor,	Arts,	Leaksville.
Hamilton, John Wallace,	Arts,	Atlantic.
Harper, Robert Luther,	Arts,	Whitakers.
Harris, Herman Hunter,	Science,	Henderson.
Harris, Joseph Pratt,	Arts,	Sulphur Springs.
Harrison, Thomas Perrin, Jr.,	Arts,	Raleigh.
Hatcher, Matthew James,	Arts,	Mount Olive.
Hatsell, Atticus Haygood,	Science,	Hubert.
Haughton, Alexander Andrews,	Science,	Charlotte.
Herty, Charles Holmes, Jr.,	Science,	Chapel Hill.
Hill, Dudley Brown,	Arts,	Warsaw.
Hill, John Burt,	Arts,	Louisburg.
Hines, Samuel Phillip,	Arts,	Kinston.
Hobgood, James Raymond,	Science,	Mapleville.
Holding, Clement Bolton,	Arts,	Raleigh.
Holding, Graham Davis,	Arts,	Raleigh.
Holton, Gilmer Heriot,	Arts,	Charlotte.
Hooks, Bennett,	Arts,	Fremont.

Hooper, Zebulon Vance,	Science,	Elizabeth City.
Horton, Freeman Hudson,	Science,	Bradentown, Fla.
Horton, Hamilton Cowles,	Science,	Winston-Salem.
Huff, Herbert Henry,	Arts,	Soudan, Va.
Huffstetler, Joseph Foster,	Arts,	Gastonia.
Hunter, William Fred,	Arts,	Pittsboro.
Hyder, Thomas Jefferson,	Arts,	Hendersonville.
Jackson, Hosea M.,	Arts,	Clinton.
Jennette, William Carl,	Science,	Goldsboro.
Jobe, Levi Haywood,	Arts,	Mebane.
John, Frank Bell,	Arts,	Laurinburg.
Johnson, George Washington,	Science,	Wallace.
Joines, Aaron Oscar,	Arts,	Stratford.
Jones, Christopher,	Arts,	Charlotte.
Kato, Kameichi,	Arts,	Takatamura, Japan.
Kennedy, James Connor,	Arts,	Moltonville.
Kimball, Durelle Boyd, Jr.,	Arts,	Henderson.
King, Charles Banks, Jr.,	Arts,	Charlotte.
Kinlaw, William Bernard,	Science,	Rocky Mount.
Kirkman, William Robert,	Arts,	Greensboro.
Kittrell, Leon Louis,	Arts,	Ayden.
Koonts, Henry Valentine,	Arts,	Mount Ulla.
Koonts, Raymond Ray,	Arts,	Mount Ulla.
Koontz, Curtis Lee,	Science,	Lexington.
Lamb, John Ferebee,	Science,	Elizabeth City.
Lamm, Allie Clifford,	Arts,	Lucama.
Landis, Clinton Brace,	Arts,	Marion.
Lasley, Carl Thomas,	Science,	Reidsville.
Latta, Eric Amos,	Arts,	Lyons.
Ledford, Robert Newton,	Arts,	Lee.
Leonard, William Ernest,	Science,	Lexington.
Lewis, Meriweather,	Science,	Kinston.
Lewis, Roscoe B.,	Arts,	Clinton.
Lindsay, Wallace B.,	Arts,	Lenoir.
Linker, Joseph Burton,	Arts,	Salisbury.
Long, Flynn Vincent,	Arts,	Matthews.
Long, Herbert Samuel,	Science,	Graham.
Lynch, Peter Francisco,	Arts,	Raleigh.
McCanless, Leon,	Arts,	Salisbury.
McClamrock, Roland Prince,	Science,	Greensboro.
McIver, Duncan Evander,	Arts,	Sanford.
McMichael, Jonathan Earle,	Arts,	Wentworth.
McMillan, William Douglas, Jr.,	Arts,	Wilmington.
McPherson, Paul Vestal,	Arts,	Liberty.

McSwain, Peyton,	Arts,	Shelby.
McVey, Joseph Wayne,	Arts,	Snow Camp.
Madry, Robert Wilson,	Arts,	Scotland Neck.
Makepeace, Henry Fisher,	Arts,	Sanford.
Marsh, Herman Earl,	Arts,	Marshville.
Mar·h, William Edward,	Science,	Aulander.
Mason, Manly,	Arts,	Atlantic.
Matthews, Sanford Eugene,	Arts,	Siloam.
Matthews, William Elmer,	Arts,	Clinton.
Mease, Charles Medford,	Science,	Canton.
Meredith, Benjamin Lacy,	Science,	Newbern.
Miller, Cornelius,	Science,	Chapel Hill.
Montgomery, James Erwin,	Arts,	Burlington.
Moore, Theophilus Wilson,	Science,	Miami, Fla.
Morris, George Dillon,	Arts,	Goldsboro.
Morrison, William Fred,	Arts,	Statesville.
Neely, Wade Swann,	Science,	Charlotte.
Neiman, Ernest,	Arts,	Charlotte.
Newell, Elliott Culpepper,	Science,	Rocky Mount.
Newell, William Clifton,	Arts,	Newell.
Nichols, William,	Science,	Roxboro.
Norris, John Ernest,	Science,	Holly Springs.
Norwood, George McIntosh,	Arts,	Goldsboro.
O'Briant, Albert Lee,	Science,	Timberlake.
O ttinger, Albert,	Arts,	Wilson.
Pace, Lawrence Justus,	Arts,	Hendersonville.
Patton, John William,	Arts,	Murphy.
Payne, Aubrey Clifton,	Arts,	Rural Hall.
Pearson, James Fred,	Arts,	Gastonia.
Perry, Henry Hilman,	Arts,	Belvidere.
Pfaff, Marion Edwin,	Arts,	Pfafftown.
Pittard, Bridges Winston,	Arts,	Nelson, Va.
Pless, James William,	Arts,	Marion.
Price, Rolland Ernest,	Arts,	Ellenboro.
Prince, Hugh Williamson,	Arts,	Dunn.
Proctor, James Knott,	Science,	Grimesland.
Prophit, Clarence Alston,	Arts,	Monroe, La.
Rand, Walter,	Arts,	Smithfield.
Rankin, Robert Richard,	Arts,	Mount Holly.
Ravenel, Samuel Fitzsimons,	Arts,	Green Pond, S. C.
Redfearn, William Alexander,	Arts,	Wingate.
Reid, John Calvin,	Arts,	High Rock.
Reid, Samuel Leslie,	Arts,	Lowell.
Rendleman, David Atwell,	Arts,	Salisbury.

Richardson, Zebulon Vance,	Arts,	Wendell.
Riggs, Robert Harvey,	Arts,	Dobson.
Rimmer, Ralph Horton,	Science,	Hillsboro.
Robbins, Marvin Russell,	Arts,	Rocky Mount.
Robertson, Owen Spencer,	Science,	Hillsboro.
Rogers, Wiley Mager,	Arts,	Raleigh.
Ross, Robert Marion, Jr.,	Arts,	Shelby.
Rountree, Moses,	Arts,	Wilson.
Rush, Zebulon Harris,	Science,	Ashboro.
Rutledge, Frederick Reeves,	Science,	Asheville.
Sawyer, J. P.,	Science,	Asheville.
Schenck, Samuel Moore,	Science,	Lawndale.
Schwartz, Isaac,	Arts,	Raleigh.
Scott, Byron Carlisle,	Science,	Charlotte.
Sedberry, Chesley,	Arts,	Wadesboro.
Shreve, Lemuel Morse,	Arts,	Hendersonville.
Simpson, Charles,	Arts,	Matthews.
Smith, Norment,	Science,	Weldon.
Smith, Oswald Patton,	Arts,	Hendersonville.
Smith, Walter Pleasant,	Arts,	Burlington.
Smithey, Ira Wellborn,	Science,	Wilkesboro.
Snell, William Hunter,	Science,	Belhaven.
Snider, Charles Lee,	Arts,	Denton.
Snoddy, Charles Edison,	Arts,	Mount Airy.
Spann, Lewis Lester,	Arts,	Granite Falls.
Spencer, Edward Lee,	Arts,	Lenoir.
Spencer, Rebert Baxter,	Arts,	Hobucken.
Steele, William Trabue,	Arts,	Nashville, Tenn.
Stephenson, William Hermas,	Arts,	Raleigh.
Stockton, Ralph Madison,	Arts,	Winston-Salem.
Stokes, Thomas Dodds,	Arts,	Ruffin.
Stone, John Lewis,	Arts,	Kittrell.
Stuckey, Jasper Leonidas,	Arts,	Kenly.
Tanner, Simpson Bobo, Jr.,	Arts,	Charlotte.
Tatum, Walter Spurgeon,	Arts,	Todd.
Tayloe, John Cotten,	Science,	Washington.
Taylor, Charles Irwin,	Arts,	Pikeville.
Tennent, Charles Gaillard,	Arts,	Asheville.
Terry, Edgar Burton, Jr.,	Arts,	Rockingham.
Terry, John Skally,	Science,	Rockingham.
Thompson, Dean Matt,	Arts,	Siler City.
Thompson, Franklin,	Arts,	Jacksonville.
Turlington, Richard Stamey,	Arts,	Clinton.
Upchurch, Lonnie Milton,	Arts,	New Hill.

Wagner, Charles Woodley,	Science,	Wilmington.
Ward, Carson Powell,	Arts,	Belvidere.
Warren, Ernest Robert,	Arts,	Gastonia.
Warren, Gordon Wells,	Science,	Durham.
Weathers, Bynum Edgar,	Arts,	Shelby.
Weaver, Walden,	Arts,	Bessemer City.
Webb Charles Bruce,	Arts,	Asheville.
Weeks, Hassell Howard,	Arts,	Whitakers.
Wharton, William Lacy,	Arts,	Smithfield.
White, Boyd,	Arts,	Gibson.
White, Henry Bryan,	Arts,	Aulander.
Wilkins, Thomas Clingman,	Arts,	Rose Hill.
Williams, Coy Reitzell,	Arts,	Graham.
Williams, Herbert Benjamin,	Science,	Wilson.
Williams, Jennings Bryan,	Arts,	Warsaw.
Wilson, Henry Van Peters, Jr.,	Arts,	Chapel Hill.
Wilson, Robert Gladstone,	Science,	Swannanoa.
Wilson, Virgil Angelo,	Arts,	Pfafftown.
Wilson, William Gilliam, Jr.,	Science,	Wilson's Mills.
Wood, Edward Phillip,	Science,	Canton.
Wood, Herbert Eugene,	Arts,	Raleigh.
Woodard, Clement Manly,	Arts,	Whartonsville.
Woodley, Samuel Spruill,	Arts,	Creswell.
Woodward, Jacob Garrett,	Arts,	Democrat.
Woody, Iredell Winfred,	Arts,	Gray.
Worthington, Hubert Smith,	Science,	Winterville.
Wrenn, Lucien Patterson,	Arts,	Mount Airy.
Yelverton, William Bayard,	Arts,	Goldsboro.
York, William Marvin,	Arts,	High Point.
Young, Marvin Pleasant,	Arts,	Spencer.
Young, Richard Leonidas,	Arts,	Charlotte.

Special Students

Abel, Hugh,	Elect. Med.,	Waynesville.
Abney, Joel Richard,	Special,	Greenwood, S. C.
Alexander, Clayton Brown,	Elect. Teach'g,	Matthews.
Alexander, William Ross,	Special,	Statesville.
Andrews, Junius Mebane,	Elect. Med.,	Mebane.
Atkinson, Mahlon Hicks,	Elect. Med.,	Salisbury.
Barden, Thomas Atlas,	Elect. Law,	Burgaw.
Best, Robert Judson,	Elect. Med.,	LaGrange.
Blackmer, Sidney Alderman,	Elect. Law,	Salisbury.
Blomberg, Sigmund,	Elect. Med.,	Asheville.
Booth, Ernest Surgeon,	Elect. Law,	Durham.

Branson, Philip Lanier,	Special,	Chapel Hill.
Brinkley, Harvey Meares,	Elect. Med.,	Elm City.
Bryan, Lynnwood Sessums,	Elect. Med.,	Oxford.
Bullock, Duncan Douglass,	Elect. Med.,	Rowland.
Calloway, Wiley Wert,	Elect. Med.,	Nile.
Campbell, Milton Clyde,	Special,	Taylorsville.
Clement, Louis Heyl, Jr.,	Special,	Salisbury.
Cline, Carl Vernon,	Elect. Med.,	Hickory.
Coleman, James Millar,	Special,	Asheville.
Conoly, Lacy Newton,	Elect. Med.,	Shannon.
Cox, James Marmaduke,	Elect. Law,	Hertford.
Daniels, Charles Cleaves,	Special,	Wilson.
Davis, Robert Cowan,	Special,	Wilmington.
DeLaney, Charles Oliver,	Elect. Med.,	Matthews.
Dillon, Fairfax Kirkwood,	Special,	Greensboro.
Dixon, Rufus Herbert,	Elect. Med.,	Bishopville, S. C.
Dunn, Fred William,	Elect. Med.,	Mount Holly.
Gardner, John Noee,	Elect. Med.,	Shelby.
Gold, Benjamin,	Elect. Med.,	Lattimore.
Hackler, James Frank,	Elect. Law,	Sparta.
Hambright, Ray Kinard,	Special,	Grover.
Hart, Julian Gilliam,	Elect. Law,	Winston-Salem.
Hartshorn, Edwin Shotts,	Elect. Law,	Asheville.
Hill, Edward Ashton,	Special,	Winston-Salem.
Holmes, Joseph Austin, Jr.,	Special,	Washington, D. C.
Howard, Samuel Alfred,	Elect. Med.,	Oxford.
Johnson, Henry McNair,	Elect. Law,	Burgaw.
Kanner, Harry Mitchell,	Elect. Med.,	Sanford, Fla.
Kerschner, Harland Mease,	Special,	Spencer.
Kornegay, Alma,	Special,	Chapel Hill.
Lackey, Boston McGee,	Elect. Law,	Lincolnton
Liddell, Anna Forbes,	Special,	Charlotte.
Litaker, Oliver Milton,	Elect. Law,	Thomasville.
Love, James Franklin,	Special,	Lincolnton.
Marsh, Frank Baker,	Elect. Med.,	Salisbury.
Martin, Watt, Jr.,	Special,	Winston-Salem.
Noa, Ernestine,	Special,	Lookout M., Tenn.
Perkins, Ettie May,	Elect. Med.,	Morganton.
Pittman, Henry Lee,	Elect. Med.,	Fayetteville.
Pleasants, Harvey McKay,	Special,	Raleigh.
Ragland, William Trent,	Special,	Salisbury.
Ray, James Clyde,	Special,	Hillsboro.
Rhew, Nathan Young,	Elect. Med.,	Rougemont.
Riddle, Norwood Clayton,	Elect. Med.,	Sanford.
Robbins, William Dudley,	Elect. Med.,	Raleigh.

Scott, Albert Lee,	Elect. Med.,	Pollokville.
Sheek, James Kimbrough,	Elect. Med.,	Mocksville.
Sherrill, Horace Cleveland,	Special,	Lincolnton.
Shields, Leon Grady,	Special,	Hobgood.
Shuford, George Adams,	Elect. Law,	Asheville.
Smith, John Leroy,	Special,	Chapel Hill.
Sparrow, Wescot Oliver,	Special,	Chapel Hill.
Spencer, William Oliver, Jr.,	Elect. Med.,	Winston-Salem.
Stevens, Albert Franklin,	Special,	Jerry.
Swain, Herbert Linwood,	Elect. Law,	Albemarle.
Taylor, James Alexander,	Elect. Law,	Oxford.
Taylor, Russell Bayard,	Elect. Med.,	Seaboard.
Townsend, William Freeman,	Special,	Greensboro.
West, Gordon Fitzhugh,	Elect. Med.,	Bynum.
Wilson, Fred Lee,	Special,	Charlotte.
Winters, Sellie Robert,	Elect. Journal.,	Stem.
Wunsch, William Robert,	Special,	Monroe, La.

Senior Students in Law

Beckwith, Clifton Warren,	Raleigh.
Berry, Margaret Kollock, A. B., 1913.	Chapel Hill.
Brock, Burr Coley,	Farmington.
Burnett, James Alexander,	Asheville.
Caldwell, Joe Yongue, A. B., 1913.	Statesville.
Cansler, John Scott, A. B., 1914.	Charlotte.
Coffey, Charles Donald, Jr.,	North Wilkesboro.
Cowles, Joseph Sanford, A. B., 1911.	Wilkesboro.
Daniel, James Manly, Jr., A. B., 1912.	Denton.
Dawson, Joseph Green, A. B., 1911.	Newbern.
Dees, Julius Gladstone,	Grantsboro.
Freeman, Robert Alexander, A. B., 1912.	Dobson.
Gilman, Thomas Etheridge,	Jacksonville.
Graham, Augustus Washington, Jr., A. B., 1912.	Oxford.
Ham, Mattie Theodosia,	Charlotte.
Henry, Byron Vance, A. B., 1912.	Lilesville.
Johnston, Julius, Jr.,	Yanceyville.
Jones, Frank Carleton,	Plymouth.

Jones, Leslie Edwards,	Swan Quarter.
Kyser, Howell Royster,	Rocky Mount.
Lanier, James Conrad,	Greenville.
A. B., 1912.	
McKane, Paul,	Charlotte.
McNeill, Lauchlin,	Chapel Hill.
B. S., 1906, Davidson College.	
Mebane, Banks Holt,	Greensboro.
Moser, Ira Cleveland,	Rock Creek.
A. B., 1911.	
Pou, James Hinton, Jr.,	Raleigh.
Raynor, James,	Chapel Hill.
Singleton, Herbert James,	Red Springs.
Smith, Major Thomas,	Reidsville.
Spears, Marshall Turner,	Lillington.
A. B., 1913, A. M., 1914.	
Stafford, Elias Eller,	North Wilkesboro.
Stroup, Matthew Augustus,	Cherryville.
Trotter, Benjamin Carter,	Reidsville.
A. B., 1911.	
Turbyfill, Joseph Manson,	Waynesville.
B. A., 1913, Washington and Lee University.	
Vinson, Barnard Bee,	Littleton.
A. B., 1908.	
Wall, LeRoy Byron,	Tobaccoville.
Wharton, Cyrus Richard,	Gibsonville.
A. B., 1912.	
Whiting, Seymour Webster,	Raleigh.
A. B., 1914.	
Winston, Robert Watson, Jr.,	Raleigh.
A. B., 1912.	

Junior Students in Law

Alderman, Harriss Percy,	Wilmington.
Allen, Reynold Tatum,	Kinston.
A. B., 1914.	
Aycock, Benjamin Franklin,	Fremont.
A. B., 1914.	
Barber, J. Wade,	Pittsboro.
A. B., 1914, Guilford College.	
Bell, Clifton Linwood,	Swan Quarter.
Blount, Marvin Key,	Bethel.
A. B., 1914, Randolph-Macon College.	
Boushall, Thomas Callendine,	Raleigh.
Brinson, George Grady,	Reelsboro.
Bryan, Robert Thomas, Jr.,	Chapel Hill.
Burnett, Claudius Thaddius,	Ninety-six, S. C.

- Coggin, Charles Lee,
 Craig, George Winston,
 Crawford, Hilary Herbert,
 Gardner, Paris Cleveland,
 Graydon, Augustus Tompkins,
 B. S., 1914, Alabama Polytechnic Institute.
 Grimsley, Harry Barnette,
 A. B., 1914.
 Hamilton, Luther,
 Hancock, Franklin Wills,
 Henderson, Mary Ferrand,
 Holton, George Ricks,
 Hornick, Adolph Robert,
 Leach, Oscar,
 A. B., 1914.
 Little, Robert Eugene, Jr.,
 Lovelace, Oscar Newton,
 Lupton, Edward Willis,
 Marrow, Henry Burwell,
 A. B., 1912.
 Marsh, Edward Baxter,
 Martin, Grover Adlai,
 Metz, Harold Wilbur,
 Mick, Ernest Grant,
 A. B., 1914, Weaver College.
 Odom, John Daffin,
 Partrick, Theodore, Jr.,
 Pritchett, James Turner,
 A. B., 1914.
 Rohleder, Milton Earl,
 Rouse, Walter Bryan,
 Royster, Royal Hobgood,
 Shuford, Richard Henry,
 A. M., 1914.
 Simmons, James Lawrence,
 A. B., 1909.
 Simmons, Enoch Spencer,
 Taylor, James Alexander,
 Traywick, Roy Aaron,
 Trenchard, Thomas Gawthrop,
 A. B., 1895, Princeton University.
 Turner, Henry Clay,
 Wilkinson, William Stronach, Jr.,
 Woodard, Etheldred Henry,
 Woollcott, Philip,
 Zollicoffer, Allen,
- Salisbury.
 Raleigh.
 Waynesville.
 Shelby.
 Greenwood, S. C.
 Greensboro.
 Atlantic.
 Oxford.
 Salisbury.
 Winston-Salem.
 Charleston, S. C.
 Raeford.
 Wadesboro.
 Mooresboro.
 Swan Quarter.
 Chapel Hill.
 Salisbury.
 East Bend.
 Nashville, Tenn.
 Weaverville.
 Rocky Mount.
 Clinton.
 Lenoir.
 Charlotte.
 Dover.
 Oxford.
 Hickory.
 Shelby.
 Washington.
 Oxford.
 Marshville.
 Chapel Hill.
 Norwood.
 Rocky Mount.
 Wilson.
 Salisbury.
 Weldon.

Special Students in Law

Bender, Robert Philemon,	Pollokville.
Hambly, William Hawkins,	Salisbury.
Johnson, Robert Grady,	Burgaw.
Kirby, Dallas Cecil,	Winston-Salem.
McGraw, William Harold,	Detroit, Mich.
Monroe, Robert Andrew,	Laurinburg.
Nelson, Andrew Scroggs,	Lenoir.
Pou, George Ross,	Smithfield.
Waggoner, James Martin,	Salisbury.
Webb, Junius Clarence,	Chapel Hill.
Whitfield, Henry Adams,	Goldsboro.

Students in Law—(Summer School)

Alexander, Julia McGehee,	Charlotte.
Bender, Robert Philemon,	Pollokville.
Bethea, John Crawford,	Dillon, S. C.
A. B., 1914, Wofford College.	
Brittain, Basil Frank,	Ashboro.
Brothers, William Tyndall,	Elizabeth City.
A. B., 1910, Trinity College.	
Farrior, Kenneth McKinnon,	Chapel Hill.
Folger, Alonzo Dillard,	Dobson.
A. B., 1912.	
Gattis, Samuel Mallette, Jr.,	Hillsboro.
A. B., 1912.	
Gilman, Thomas Etheridge,	Jacksonville.
Glasgow, Charles Spears,	Lexington, Va.
A. B., LL. B., 1914, Washington and Lee University.	
Guthrie, Thomas Claiborne, Jr.,	Charlotte.
Ham, Mattie Theodosia,	Charlotte.
Harris, Elisha Carter,	Elizabeth City.
A. B., 1913.	
Harry, Woodfin Grady,	Grover.
A. B., 1913.	
Henry, Byron Vance,	Lilesville.
A. B., 1912.	
Hill, James DeLeon Millar,	Wilson.
Jones, Frank Carleton,	Plymouth.
Jordan, John Richard,	Winton.
Jordan, William Mills,	Winton.
Kyser, Howell Royster,	Rocky Mount.
McNeill, Lauchlin,	Chapel Hill.
B. S., 1906, Davidson College.	
Moore, William Peter,	Fonta Flora.
A. B., 1912.	

Moser, Ira Cleveland, A. B., 1911.	Burlington.
Norwood, John H.,	Norwood.
Parker, Albert D.,	Sylva.
Phillips, Fitzroy Donald,	Laurinburg.
Roberson, Hoyt, A. B., 1911.	Polloksville.
Robertson, Archibald, B. L., 1914, University of Virginia.	Staunton, Va.
Spears, Marshall Turner, A. B., 1913, A. M., 1914.	Lillington.
Strickland, Moses Stewart,	Scotland Neck.
Strong, George Vaughan, A. B., 1914.	Raleigh.
Teague, Claude Edward, A. B., 1912.	Hoffman.
Tolson, Henry Albert,	Newport.
Trotter, Benjamin Carter, A. B., 1911.	Reidsville.
Vinson, Barnard Bee, A. B., 1908.	Littleton.
Wharton, Cyrus Richard, A. B., 1912.	Gibsonville.
Williams, James McBryde,	Godwin.
Winston, Robert Watson, Jr., A. B., 1912.	Raleigh.

Students in Medicine

Angel, Furman,	First,	Franklin.
Austin, DeWitt Ray,	Second,	Charlotte.
Bigger, David Andrew,	Second,	Rock Hill, S. C.
Bonner, John Byran,	First,	Bonnerton.
Brockman, Harry Lyndon,	Second,	Greensboro.
Brooks, George Martin,	First,	Sunbury.
Castelloe, Cola,	Second,	Aulander.
Cline, Carl Vernon,	First,	Hickory.
Cook, Grady Carlyle,	First,	Winston-Salem.
Cook, Henry Lilly, Jr.,	First,	Fayetteville.
Coppridge, William Maurice,	First,	Roanoke, Va.
Corpening, Cora Zetta,	First,	Mars Hill.
Cox, Russell Mills,	Second,	Washington.
Craven, Thomas,	Second,	Charlotte.
Dalton, Grover Cleveland,	First,	Gilkey.
Davis, George Hamilton, B. S., 1914, Wake Forest College.	First,	Wake Forest.
Dickson, James Gillespie,	First,	Raeford.
Ervin, Carl Edgar,	First,	Troutmans.

Folger, Paul Bernays,	First,	Dobson.
Gainey, John White,	Second,	Parkton.
Gaither, Alfred Long,	First,	Statesville.
Harrell, William Henry, Jr.,	First,	Williamston.
Hawfield, James,	First,	Matthews.
Hawks, Cyrus Eugene,	First,	Mount Airy.
Hayworth, Roy Washington,	First,	Ashboro.
Hicks, Vonnie Monroe,	First,	Greensboro.
Holt, John Ransom, Jr.,	First,	Princeton.
Hubbard, Frederick Cecil	First,	Wilkesboro.
Huff, John Melville,	Second,	Henderson.
Isley, Christian Leonard,	Second,	Burlington.
Jones, Leonidas LeRoy,	Second,	Kenansville.
A. B., 1914, Wake Forest College.		
Joyner, James Craig,	First,	Princeton.
Kirkpatrick, Cleveland Fane,	Second,	Clyde.
A. B., 1909.		
Kluttz, DeWitt,	Second,	Chester, S. C.
B. S., 1911, Davidson College.		
Knowles, Daniel Lamont,	First,	Mount Olive.
A. B., 1914.		
Lassiter, Henry Grady,	Second,	Lasker.
Latham, Joseph Roscoe,	Second,	Belhaven.
Lawrence, Benjamin Jones,	First,	Creedmore.
Long, Joseph Kindred,	First,	Seaboard.
Lyon, Henry Wise,	First,	Windsor.
A. B., 1911.		
McCants, John Marion,	Second,	Guthriesville, S. C.
McDade, Brodie Banks,	First,	Hillsboro.
McGuire, Burrus Boyd,	First,	Norton.
McLean, Ewen Kenneth,	First,	Buie.
Mangum, Charles Preston,	First,	Kinston.
Millender, Charles White,	First,	Asheville.
Mitchell, Roy Colonel,	First,	Mount Airy.
Moore, Julian Alison,	First,	Wilmington.
Nash, Frank Lewis,	First,	Lumberton.
Newman, Samuel Raphael,	Second,	Washington.
Norburn, Charles Strickland,	Second,	Acton.
Parrott, Mercer Cranor,	Second,	Kinston.
Payne, Ancus Lafayette, Jr.,	First,	Rural Hall.
Pendergrass, Eugene Percival,	First,	Florence, S. C.
Plyler, Ralph Johnson,	First,	Cleveland.
Rankin, Richard Brandon,	Second,	Concord.
Rawls, John Lewis,	Second,	Gatesville.
Ray, Frank Leonard,	First,	Wake Forest.
Reyner, Daniel,	First,	Raleigh.

Rousseau, James Park,	First,	Wilkesboro.
Sabiston, Frank,	First,	Jacksonville.
Scott, Samuel Floyd,	First,	Haw River.
Singletary, George Currie,	Second,	Chapel Hill.
A. B., 1905.		
Smith, Claiborne Thweatt,	First,	Scotland Neck.
Smith, Hugh Percival,	First,	Timmons ville, S. C.
A. B., 1914, Wake Forest College.		
Spence, Ralph Case,	Second,	Kipling.
A. B., 1914.		
Spoon, Samuel Clarence,	First,	Haw River.
Stone, Leslie Ogburn,	First,	Kittrell.
Sugg, Eugene Sifax,	First,	Chapel Hill.
Tamraz, John Moorhaj,	Second,	Ajerbidjau, Persia.
Tayloe, David Thomas, Jr.,	First,	Washington.
Thigpen, Frank Lafayette,	Second,	Tarboro.
Thigpen, Harry Gordon,	Second,	Tarboro.
Wadsworth, Harvey Bryan,	First,	Cove City.
A. B., 1909.		
Warlick, Henry Clinton,	First,	Newell.
West, Clifton Forrest,	Second,	Dover.
Wheeler, James Hartwick,	First,	Holly Springs.
Williams, William Christopher,	Second,	Durham.
Wolff, Denis Roscoe,	First,	Rural Hall.
Wright, Junius Holt,	First,	Siler City.
Yarborough, Nathaniel Bayard,	First,	Cary.

Students in Pharmacy

Allen, William Wilson,	Second,	Hendersonville.
Andrews, Fannie Jackson,	Third,	Durham.
Andrews, Junius Franklin,	Second,	Durham.
Andrews, Richard Homer,	Third,	Chapel Hill.
Beach, Newton Lewis, Jr.,	First,	Morganton.
Beard, John Grover,	Third,	Chapel Hill.
Ph. G., 1909.		
Blackwelder, George Sumpter,	First,	Hickory.
Blue, Kenneth Campbell,	Special,	Hope Mills.
Brantley, Paul,	Special,	Wilson.
Brewer, Strowd Otis,	Special,	Thomasville.
Bruce, Paul Ernest,	First,	Mars Hill.
Byrd, George,	First,	Fayetteville.
Cassel, Arthur Samuel,	Special,	North Wilkesboro.
Finley, Gray Bynum,	Second,	Marion.
Fishel, Arthur Levy,	Second,	Winston-Salem.
Furman, Rickey Lawrence,	Special,	Louisburg.
Gamble, Charles Franklin,	First,	Waxhaw.

Grimes, George David,	First,	Robersonville.
Harper, John Sugg,	Second,	Snow Hill.
Henderson, John Leland,	Third,	Hickory.
Herring, Needham Bridgman,	First,	Wilson.
Higgins, Summey Byrd,	Third,	Leicester.
Hoey, Franklin Ernest,	First,	Shelby.
Hood, Richard Thornton,	First,	Kinston.
Hooper, Fred Lambert,	Special,	Sylva.
Horsley, Howard Tate,	First,	Belmont.
Horton, Roland William,	First,	Monroe.
Koonce, Thomas Ricaud,	Second,	Chadbourn.
Kyser, Edward Vernon,	Second,	Rocky Mount.
Ledbetter, Edmond DeBerry,	First,	Red Springs.
McDuffie, Roger Atkinson,	Second,	Greensboro.
McFadyen, Henry Faucette,	First,	Waynesville.
McGee, Denver Wilson,	First,	Leicester.
Mann, Randall Newton,	First,	High Point.
Merritt, Nello Harward,	First,	Durham.
Miller, Clarence Mason,	First,	Rock Hill, S. C.
Mills, Jasper Arthur,	Special,	Tabor.
Morris, Amos,	First,	Gastonia.
Nicholson, Elliott Nolley,	Special,	Murfreesboro.
Patterson, Fred Marion,	Second,	Concord.
Peeler, George Calvin,	Second,	Salisbury.
Pender, Frank Howard, Jr.,	Special,	Tarboro.
Pope, William Crawford,	First,	Mars Hill.
Roberts, Herschel,	First,	Jupiter.
Rosemond, Jacob Fletcher,	First,	Kinston.
Rosenbaum, Carl David,	Second,	Tarboro.
Silverman, Nathan Jacobi,	First,	Wilmington.
Smith, Willie Wesley,	First,	Waynesville.
Tucker, Ephraim Colly,	First,	Concord.
Taylor, Charles Elisha, Jr.,	Special,	Wilmington.
A. B., 1894, Wake Forest College.		
Turlington, Jesse Eli,	First,	Benson.
Warren, Junius Campbell,	Special,	Benson.
Watson, John Moody,	First,	Southport.
West, Robert Ray,	First,	Dover.
Whitmire, William Probit, Jr.,	Second,	Hendersonville.
Wiggins, William Winston,	First,	Coats.
Wilson, Lowry Reid,	Second,	Gastonia.
Wolfe, Benjamin Houston,	First,	Spencer.

SUMMER SCHOOL (1914)

Graduates

Bailey, Isaac Mayo, A. B., 1914.	Smithfield.
Carlton, David Hill, A. B., 1914.	Kernersville.
Carroll, Hardy Abram, A. B., 1914, Guilford College.	Mizpah.
Feezor, John Gilmer, A. B., 1914.	High Rock.
Futrelle, Kinnie Thayer, A. B., 1913, Guilford College.	Greensboro.
Hart, Meade, A. B., 1914.	Mooreville.
Hatcher, Martin Armstead, A. B., 1913.	Rose Hill.
Highsmith, James Albert, A. B., 1910.	Greensboro.
Isley, Robert Waldon, A. B., 1913.	Liberty.
James, Fairley Patterson, A. B., 1912.	Laurinburg.
Jones, Troy Isaiah, A. B., 1914.	Helton.
Joyner, Elisha Wiley, A. B., 1913.	Manteo.
McCanless, Walter Frederick, Ph. B., 1904.	Wadesboro.
McKnight, Roy Bowman, A. B., 1914.	Charlotte.
McLean, Harry Herndon, A. B., 1907, Fredericksburg College.	Farmville.
Mendenhall, Mary, A. B., 1913, Guilford College.	High Point.
Nixon, Joseph Robert, A. B., 1910.	Lincolnton.
Pittman, Columbus Washington Eagles, A. B., 1912.	Whitakers.
Price, Lemuel Alexander, A. B., 1914.	Unionville.
Short, George Asa, A. B., 1913, Guilford College.	Greensboro.
Smith, Junius Everett, A. B., 1914, Wake Forest College.	Siler City.
Thorn, Joseph Burrell, A. B., 1908, Wake Forest College.	Bostick.
Workman, John Hilary Andrew, A. B., 1913.	Cherryville.

Undergraduates

Abernethy, Dora Elizabeth, B. S., 1908, Weaver College.	Arts,	Chapel Hill.
Abernethy, Frances Truehart,	Arts,	Chapel Hill.
Allred, Joseph Henry,	Arts,	Mount Airy.
Aycock, Pearl, Graduate, 1904, Littleton College.	Arts,	Micro.
Bell, Clifton Linwood,	Arts,	Swan Quarter.
Berg, Albert John,	Arts,	Greensboro.
Blalock, Hubert Morse,	Arts,	Raleigh.
Capehart, William Jonathan,	Arts,	Roxobel.
Capps, James Arthur,	Arts,	Bessemer City.
Coats, Robert Floyd,	Arts,	Angier.
Cook, Grady Carlyle,	Special,	Winston-Salem.
Crowell, Gordon Bryan,	Arts,	Lincolnton.
Day, John Tucker,	Arts,	Walkertown.
Ervin, Carl Edgar,	Arts,	Troutmans.
Fulcher, Manly,	Arts,	Atlantic.
Fuller, Walter Pliny,	Arts,	Bradentown, Fla.
Green, Rebecca Mary,	Arts,	Goldsboro.
Gregory, William Herbert,	Arts,	Stovall.
Harper, Allen Bostick,	Arts,	Chapel Hill.
Hawkins, Rose Elizabeth,	Special,	Charlotte.
Huff, Herbert Henry,	Arts,	Soudan, Va.
Hunter, Norfleet,	Arts,	Oxford.
Hunter, Wade Russell,	Arts,	Alexander.
Johnston, Charles Louis,	Arts,	Knoxville, Tenn.
Jones, Laura M.,	Arts,	Franklin.
Kerr, William Clark Doub,	Arts,	Greensboro.
Lambert, Henry Dionysius,	Arts,	Angier.
Lassiter, James Horace,	Arts,	Rich Square.
Ledbetter, Ida Belle,	Arts,	Dorne.
Lindau, Sigmund Baach,	Science,	Greensboro.
Long, Albert Anderson,	Arts,	Farmington.
McGee, Vann Ward,	Arts,	Asheville.
Mann, George Weaver,	Arts,	Prentice.
Martin, Grover Adlai,	Arts,	East Bend.
Maxwell, Baldwin,	Arts,	Charlotte.
Miller, Mary Scales,	Arts,	Chapel Hill.
Mitchell, Roy Colonel,	Science,	Mount Airy.
Moss, Clyde Bradley,	Arts,	Littleton.
Murphy, Tate Thurman,	Arts,	Atkinson.
Newman, Samuel Raphael,	Special,	Washington.
Parrott, Mercer Cranor,	Special,	Kinston.
Pasmore, Julia C.,	Arts,	Cary.

Peele, Rennie,
 Ruffin, Thomas White,
 Sawyer, George Lippard,
 Shrago, Jacob Philip,
 Sparrow, Westcott Oliver,
 Spencer, Rebert Baxter,
 Swain, Herbert Linwood,
 Thompson, Earl Asbury,
 Veasey, Elbert Lambert,
 Warlick, William Farrel,
 Wooten, Floyd Pugh,
 Wright, Nathaniel,

Arts, Clearwater, Fla.
 Arts, Louisburg.
 Arts, Hickory.
 Arts, Goldsboro.
 Special, Chapel Hill.
 Arts, Hoboken.
 Special, Jerry.
 Arts, Mount Holly.
 Arts, Stem.
 Arts, Newton.
 Science, Kinston.
 Arts, Chapel Hill.

Normal Students

Abercrombie, Margaret Killough,
 Abernethy, Pearl May,
 Adams, Alma,
 Albright, Flora,
 Alderman, Minnie Viola,
 Allen, Cyrena Celestial,
 Allen, Sallie,
 Andrews, Troy Monroe,
 Arrowood, Sylvia Louise,
 Atkinson, Katye Elis,
 Babbitt, Emma,
 Ball, Emma Lynn,
 Ballard, Gladys Jewell,
 Barbee, Walter Dorsey,
 Barnard, Maud,
 Barnwell, Mary Harrison,
 Barrow, Rosa E.,
 Barton, Russell Pratt,
 Baugh, Ethel Irene,
 Baxley, Lena Mayo,
 Beam, Beryl Bertie,
 Beam, Gladys May,
 Beam, Hugh Martin,
 Beam, Mrs. John Alexander,
 Beard, Douglass,
 Bell, Eric Franklin,
 Best, Aldine,
 Best, Fannie Elizabeth,
 Birdsong, Heber,
 Bivins, Esther,

Charlotte.
 Caroleen.
 Four Oaks.
 Burlington, R. No. 7.
 Edenton.
 Stem, R. No. 3.
 Ridgeway.
 Chapel Hill, R. No. 3.
 Candor.
 Enfield.
 Bayboro.
 Raleigh.
 Rowland.
 Seaboard.
 Marion.
 Thomasville.
 Raleigh.
 Chapel Hill.
 Mill Brook.
 Gibson.
 Bethel Hill, R. No. 1.
 Bethel Hill, R. No. 1.
 Woodsdale, R. No. 1.
 Woodsdale, R. No. 1.
 Parkton.
 Dunn.
 Warsaw.
 Warsaw.
 Raleigh.
 Salisbury.

Blackwood, Annie Virginia,
Blackwood, Mattie E.,
Blalock, Mrs. Chloe Parker,
Blanchard, Sara Margaret,
Blanton, Faye Whitlock,
Blomberg, Sigmund,
Bobbitt, Annie Elizabeth,
Bobbitt, Crystal,
Bobbitt, Lillie Swain,
Booth, Henrietta Anderson,
Bourne, Mary Parker,
Bowen, Harriet Emily,
Bowen, Mrs. Margaret Rockwell,
Bracey, Carline,
Bracey, May,
Bradshaw, Dorsey Thomas,
Brame, Carrie,
Brassell, Bessie,
Brown, Mamie Ethel,
Brown, Myrtle,
Bryan, Jean,
Bryan, Robert Thomas, Jr.,
Bulwinkle, Muriel Charlton,
Bumpass, Lizzie,
Burfoot, Jennie,
Burke, Ruth,
Burton, Mary Carroll,
Bustin, Dela,
Caho, Appie C.,
Cameron, Mary Esther,
Carpenter, Calvin Clayton,
Carrell, James Wilson,
Carroll, Frances Havens,
Cassidey, Lula May,
Chadwick, Annie D.,
Chappell, John Thomas,
Christman, Eva Lillian,
Clark, Harold S.
Clark, Kate,
Cobb, Amanda,
Cobb, Janie,
Cobb, Lucy,
Coble, Minnie Elizabeth,
Coburn, Addie Bess,

University, R. No. 7.
University.
Raleigh.
Belvidere.
Charlotte.
Asheville.
Enfield.
Henderson, R. No. 5.
Rougemont.
Warrenton.
Tarboro.
Jackson.
Rougemont.
Rowland, R. No. 2.
Rowland, R. No. 3.
Efland.
Macon.
Petersburg, Fla.
Hillsboro.
Robersonville.
Chapel Hill.
Chapel Hill.
Dallas.
Virgilina, Va.
Belcross.
La Grange.
Raleigh.
Enfield, R. No. 2.
New Bern.
Wilmington.
High Shoals.
Reidsville.
Turkey.
Clinton.
New Bern.
Belvidere, R. No. 1.
Burlington.
Leicester, R. No. 1.
Monroe, R. No. 5.
Lumber Bridge.
Rowland.
Elm City, R. No. 1.
Burlington, R. No. 1.
Robersonville.

Cole, Rosa Vela,
Cole, Zenobia,
Collins, Gladys Gillette,
Collins, Inda Grey,
Cook, Mary M.,
Cook, Ruth,
Coons, Robert Lee,
Cooper, Sophronia,
Costen, T. W.,
Costen, Mrs. T. W.,
Cothran, Allie,
Couch, Effie,
Coulter, Ellis Merton,
Cousins, Zelma Lorena,
Coxe, Addie Roberta,
Craig, Ella Henrietta,
Craig, Mrs. W. P.,
Craver, Henry Cleveland,
Crawford, Ava,
Crawford, Ellen J.,
Crawford, Ethel Pauline,
Crawford, Louis Russell,
Crawford, Robert Taylor,
Crews, Edna Earl,
Crowell, Estelle,
Cruse, Annie Belle,
Cunningham, Mrs. John S.,
Cunningham, Otelia Carrington,
Cunningham, Sue Somerville,
Currie, Connie,
Currie, Elizabeth Lee,
Currie, Mabel Claire,
Dalrymple, Janie,
Daniel, Lucie Edward,
Daughtry, Mrs. W. B.,
Davis, Annie Webb,
Davis, Arah West,
Davis, Carrie Mae,
Davis, George Franklin,
Davis, Lee Roy,
Day, Bertha,
Day, Jerry,
Day, Minnie,
Dean, Hettie Williams,

Hillsboro, R. No. 1.
West Durham, R. No. 1.
Maysville.
Holly Springs, R. No. 2.
Aulander.
Aulander.
Hickory.
Oxford.
Gates, R. No. 2.
Gates, R. No. 2.
Rougemont.
Jennings.
Connelly Springs.
Ringwood.
Red Springs.
Blackwood.
Marion.
Lexington, R. No. 4.
Hillsboro, R. No. 3.
Marion.
Marion.
Hertford.
Greensboro, R. No. 6.
Oxford, R. No. 5.
Concord, R. No. 4.
Spencer.
Durham.
Durham.
Durham.
Candor.
Fayetteville.
Red Springs.
Jonesboro.
Airlie.
Clayton, R. No. 3.
Stovall.
Asheville.
Pink Hill, R. No. 1.
Charlotte, R. No. 9.
Bladenboro.
Blowing Rock, R. No. 1.
Blowing Rock, R. No. 1.
Blowing Rock, R. No. 1.
Wendell.

Dean, Tazzie,
 Dellinger, Mary,
 Dew, Zelle,
 Dickens, Mamie Glenn,
 Dickson, Susie Wyatt,
 Dillon, Vivian,
 Doles, Lady Corinne,
 Dortch, Mary,
 Dowd, J. E.,
 Draughan, Lillian Alderman,
 Dunford, Mary Norville,
 Dunford, Ruth,
 Dunn, Bera Bryant,
 Durand, Mamie,
 Early, Gladys,
 Edgerton, Rena,
 Edmund, Fannie,
 Edwards, James Spurgeon,
 Edwards, John F.,
 Eldridge, Kate,
 Elliott, Mabel Delilah,
 Ellis, Ruby Carolyn,
 Everett, Faye Ernestine,
 Falls, Charlotte,
 Falls, Laura,
 Farrior, Bernice Armstrong,
 Faucette, Margaret Augusta,
 Fennell, Hettie Elizabeth,
 Ferebee, Emily C.,
 Ferebee, Jennie Marie,
 Ferrell, Cornelia,
 Finch, Era Garnet,
 Finley, Grace,
 Foster, Sallie Warren,
 Foust, Lizabel,
 Franklin, Burnie D.,
 Fulghum, Anne M.,
 Fuller, Lois Myrtle,
 Futrell, Ellen,
 Garrard, Lorena,
 Gary, Maggie Ludolph,
 Gattis, Annie,
 Gavin, Edwin Lee,
 Gentry, Ruth,

Oxford, R. No. 4.
 Lincolnton.
 Red Springs.
 Franklinton.
 Raeford.
 Tuscarora.
 Elm City.
 Goldsboro.
 Red Springs.
 Dunn.
 Winston-Salem.
 Winston-Salem.
 Hillsboro.
 Raleigh.
 Aulander.
 Selma.
 Chadbourn.
 Mars Hill.
 Barnardsville.
 Bentonville, R. No. 2.
 Bowdens.
 Clayton.
 Robersonville.
 Shelby, R. No. 4.
 Shelby, R. No. 4.
 Chapel Hill.
 Raleigh.
 Wilmington.
 New Bern.
 Shawboro.
 Clinton.
 Rocky Mount.
 Marion.
 Burlington.
 Graham, R. No. 1.
 Pyatte.
 Selma, R. No. 3.
 Louisburg, R. No. 2.
 Conway, R. No. 1.
 Rougemont.
 Spencer.
 Chapel Hill.
 Roseboro.
 Denniston, Va., R. No. 1.

Gibbs, Hallie Mae,
Gibson, Roberta,
Gilbert, Blanche Craven,
Gilbert, Ruth Marie,
Gill, Carrie Evelyn,
Gloetzner, Hilda Gertrude,
Graham, Violet,
Grant, E. Janie,
Grantham, Victor Hugo,
Graves, Isabel,
Graves, Helen Williams,
Gray, Ruby,
Grier, Janie Lee,
Grier, Mayme
Griffin, Mavis Lucile,
Grissom, Annie E.,
Guess, Wm. Conrad,
Gurley, Stella May,
Hales, Emma,
Hall, Ella,
Hamman, Edna Maie,
Hargrave, Lee L.,
Harper, Winifred Edwards,
Harrelson, Lucy,
Harrelson, Pantha Vashti,
Harrelson, Pearl,
Harris, Clara Carmichael,
Harris, Edith Louise,
Harrison, Panthea Boyd,
Hart, Cora,
Hart, Millard Filmore,
Hart, Mrs. Millard Filmore,
Hart, Samuel C.,
Haste, Bertha,
Henderson, Elizabeth Byrd,
Henson, J. B.,
Herbert, Leone Sydney,
Hermann, Jennie Gaynelle,
Herring, Pauline,
Herring, Vera,
Hiatt, Charles Edward,
Higgins, Annie Laura,
Hines, Mrs. Ernest Frederick,
Hoffman, L. R.,

Marion.
Roberdell.
Siler City, R. No. 3.
Siler City.
Henderson, R. No. 4.
Washington, D. C.
Richmond, Va.
Garysburg, R. No. 1.
Bentonville, R. No. 1.
Mt. Airy.
Leasburg.
Kinston.
Matthews.
Matthews.
Rocky Mount.
Kittrell.
Apex.
Smithfield.
Rocky Mount.
Stem, R. No. 1.
Maurertown, Va., R. 2.
Battleboro.
Snow Hill.
Cherryville, R. No. 1.
Cherryville, R. No. 1.
Cherryville.
Concord.
Enfield, R. No. 1.
Brinkleyville.
Mooresville, R. No. 3.
Seaboard, R. No. 1.
Seaboard, R. No. 1.
Mooresville, R. No. 3.
Edenton, R. No. 1.
Asheville.
Dallas.
Morehead City.
Conover.
Dunn.
Roseboro.
Pilot Mountain.
Wampler.
Kinston.
Lowell.

Holeman, Annie,
Holeman, Bertha,
Holliday, Garland Washington,
Holmes, Callie,
Holmes, James Eugene,
Holmes, John Albert,
Holmes, Ralph Wendell,
Hooker, Virginia,
Hooten, Lois Evelyn,
Hooten, Rosa Lee,
Hoover, Florence,
Hosford, Andrew Lewis,
Howard, Viola Pearl,
Howell, Vera Mae,
Hudson, Margaret Alexander,
Hudson, Mattie A.
Hughes, Lucretia Selden,
Hunter, Myra,
Hunter, Rachel Pearl,
Hunter, Susie Frances,
Huntly, Emily Toy,
Hutchins, Ernest Temple,
Ives, Claudius Leon,
Ivey, Ethel,
Johnson, Hattie,
Johnson, Jeannette,
Johnson, Mamie Estella,
Johnston, Mary Lee,
Jones, Annie Rebeccah,
Jones, Elizabeth Katherine,
Jones, Mary Elizabeth,
Jones, Margaret Cooke,
Jones, Mattie Hardy,
Jones, Ora Lee,
Jones, Pauline,
Jones, Pearl Gibson,
Jordon, Katie Eleanor,
Joyner, Bertha Verona,
Justice, Margaret,
Justice, Mary,
Justice, Pansy Rae,
Keeter, Nannie Maude,
Keith, Adeline,
Keith, Annie Faye,

Timberlake.
Raleigh.
Neuse.
Creswell.
Graham, R. No. 1.
Graham, R. No. 1.
Graham, R. No. 1.
Aurora.
Snow Hill.
Snow Hill.
Crouse.
Summerfield.
Roseboro.
Cherryville.
Waxhaw.
Smithfield.
Washington.
Apex, R. No. 3.
Alexander, R. No. 2.
Asheville.
Wadesboro.
Chapel Hill.
Grifton.
Seven Springs.
Louisburg, R. No. 5.
Wagram.
Goldsboro, R. No. 1.
Davidson.
Hope Mills, R. No. 2.
Rougemont, R. No. 3.
Louisburg
Raleigh.
Louisburg.
Louisburg, R. No. 2.
Hope Mills, R. No. 2.
Johns.
Wilmington.
Farmville, R. No. 1.
Lilesville.
Lilesville.
Snead's Ferry.
Lillington.
Wilmington.
Currie

Kelly, Bernice,
Kelly, Ethel Penelope,
Kelly, F. G.,
Kennedy, Margarette,
Kerr, Wm. Clarke Doub,
Kime, Katie,
Kirksey, Wm. Albert,
Koons, Nellie,
Kornegay, Birdie,
Lacy, Alice Loretta,
Lambeth, Mary Mafie,
Lamm, Patrick Benton,
Landis, Clinton Brace,
Lanier, Hattie Naomi,
Lassiter, Katherine B.,
Lassiter, Perry,
Latshaw, Harry Franklin,
Laughlin, Bessie,
Lawrence, Leila Mary,
Lawson, Mary Della,
Leach, Floy James,
Leake, Russel Ingram,
Lee, Helen,
Leighton, A. F.,
Lewis, Floy Rae,
Livingstone, Ollie Vick,
Lloyd, Annie Tazwell,
Lloyd, Elise R.,
Lohr, Lawrence Luther,
Long, Edna Ione,
Long, Jesse Melvin,
Loonam, Florence,
Lowrance, J. Frank,
Lunsford, Jennie Loiuse,
Luther, Mamie Victoria,
Lynch, Rachel S.,
Lyon, Mrs. Lucile,
McAdams, Hazel Marie,
McAllister, Lillie Mae,
McClees, Fannie,
McDaniel, Frances F.,
McDaniel, Pauline,
McEachern, Celeste,
McEachern, Mabel,

Clayton, R. No. 3.
Jackson.
Abbottsburg, R. No. 1.
Warsaw.
Greensboro.
Greensboro.
Morganton.
Chadbourn.
Chapel Hill.
Raleigh.
Guilford College.
Lucama.
Marion.
Hallsville.
Marion.
Woodland.
Almond.
Asheboro.
Gates, R. No. 2.
Rougemont.
Cary.
Rich Square.
Gates.
Scotland Neck, R. No. 2.
Cerro Gordo.
St. Pauls.
Chapel Hill.
Durham.
Lincolnton, R. No. 2.
Seaboard.
Mollie.
Oxford.
Mooreville.
Statesville.
Apex.
Chapel Hill.
Mintz.
Siler City.
Middleburg.
Oriental.
Uree.
Union, S. C., R. No. 1.
Wilmington.
Wilmington.

McEachern, Merle,
McFadyen, Annie,
McGee, Annie,
McGehee, Anne L.,
McGirt, Eva,
McIntyre, Carolina,
McKeithan, Annie,
McKeithan, Christian,
MacKenzie, Mary,
McKinnon, Fannie,
MacLeod, Almena,
McLeod, Maude,
McMillan, Annie Douglas,
MacMillan, Effie,
McMillan, Leila May,
McNeill, Josie,
McNeill, Lauchlin,
McPherson, Bessie Sue,
McPherson, Elizabeth Gregory,
McPheters, Elizabeth,
Macon, Clarence,
Magee, Mattie Irwin,
Marshall, Duell,
Marshburn, Owen Meredith,
Martin, Mrs. Emma Webb,
Martin, Eunice Irene,
Martin, Eva Magnus,
Matthews, Mary Ezra,
Mattocks, Julia Vance,
Mauney, Mary,
Maxwell, Berta,
Meeder, Annie Dora,
Meinung, Ruth Frances,
Mellette, Ina R.,
Mendenhall, Anna,
Meredith, Katy Lou,
Michaux, Mary Louise,
Middleton, Lucile,
Miller, Cornelius,
Miller, Herbert Craig,
Miller, Marion Spiers,
Minish, Maude Pennell,
Mitchell, Bessie Coan,
Mitchell, Lydia,

Wilmington.
Argyle.
Charlotte, R. No. 6.
Chapel Hill.
Maxton, R. No. 2.
Troy.
Raeford.
Raeford.
Chadbourn.
Wadeville.
Red Springs.
Rowland.
Linden.
Parkton.
Stedman.
Rowland.
Chapel Hill.
Burlington.
Shiloh.
Burnsville.
Climax, R. No. 1.
Wake Forest.
Charlotte, R. No. 4.
Chapel Hill.
Stovall.
Pendelton.
Pendelton.
Charlotte.
Maysville.
Newton.
Fayetteville.
Ridgeway, R. No. 1.
Winston-Salem.
Chadbourn.
High Point, R. No. 2.
Wilmington.
Goldsboro.
Goldsboro.
Chapel Hill.
Newton.
Chapel Hill.
Lenoir.
Ridgeway.
Aulander.

Monroe, Sarah Katharine,
Montgomery, Sadie Josephine,
Moore, Agnes,
Moore, Edna Earl,
Moore, Kate Williams,
Moore, Leona Elizabeth,
Moore, Lucy,
Moore, Mildred,
Moore, Nannie Iola,
Morgan, Horace G.,
Morrill, Jennie Brown,
Morris, Clara,
Morris, Lillie Belle,
Morrison, Minnie,
Moseley, Janie Frances,
Moseley, Mrs. R. E.,
Moser, John Wm.,
Moses, Mildred McKee,
Moss, Mattie,
Moss, Zebulon Vance,
Moss, Mrs. Zebulon Vance,
Myatt, Irene,
Nelson, Charlie Ethedridge,
Neville, Ernest L.,
Newton, Bertha,
Nims, Dorothy Davenport,
Noel, Fannie,
Norton, Andrew Martin,
Norwood, Evan Wilkins,
Orr, Oliver Hamilton,
Owens, Henry W. Grady,
Paddison, Blanche,
Page, Florence Nightingale,
Paris, Helen,
Paris, Mrs. James,
Parker, Mrs. Benj. Harvey,
Parker, Mabel Ruth,
Parker, Mary Emma,
Parker, Samuel Green,
Parker, Sarah,
Pearson, Leslie Winston,
Pegues, Nora,
Pelletier, Lola,
Pender, Emily Austin,

Tar Heel, R. No. 1.
Burlington.
Farmville.
Macclesfield.
Robersonville.
Robersonville.
Farmville, R. No. 1.
Atkinson.
Farmville.
Middlesex.
Snow Hill.
Rutherford College.
Rutherford College.
Loray, R. No. 1.
Snow Hill.
Snow Hill.
Rural Hall, R. No. 2.
Chapel Hill.
New London.
Clyde.
Clyde.
Smithfield.
Murfreesboro.
Monroe, La.
Salemberg.
Mount Holly.
Lexington, Miss.
Maxton.
Goldsboro.
Brevard.
Rutherfordton, R. No. 1.
Burgaw.
Morrisville, R. No. 2.
Oxford.
Oxford.
Lasker.
Rougemont.
Norwood.
Kinston, R. No. 4.
Monroe, R. No. 1.
Dudley, R. No. 2.
McFarlan.
Beaufort.
Tarboro.

- Penland, Francis Alexander,
Petway, Lucy Mercer,
Phillips, Vannie,
Pickard, Minna Thelma,
Pickard, Willie Bertha,
Pigg, Clara Mozelle,
Pilson, Elizabeth,
Pitman, Raymond Lee,
Pool, Maggie,
Pope, Rosie Lena,
Pratt, Loula,
Proctor, Richard Shirley,
Pruden, Mary Inez,
Query, Hugh Alexander,
Ragland, Lucy Washington,
Ramsaur, Thomas Michael,
Ramseur, John Hunter,
Rankin, W. W., Jr.,
Ransbottom, Bernice,
Ratcliffe, Sallie Luellyn,
Rae, Lester McCleese,
Reinhart, Edna,
Rhew, Annie Washington,
Rhew, Pattie Jane,
Rhyne, Elvira,
Rice, Elizabeth,
Richardson, Nellie,
Ridge, Ida Elizabeth,
Rigsbee, Hannah Elizabeth,
Roberson, Hoyt,
Robertson, Mary,
Robinson, Mamie,
Rogers, George Oroon,
Roseman, Mary Neal,
Rountree, C. Wesley,
Rountree, Mrs. C. Wesley,
Rucker, Jimmie Lou,
Russell, Susie Donald,
Saunders, David Guy,
Scroggs, James Wade,
Self, Zeb Vance,
Sessoms, Lillian Jarvis,
Shamburger, Maud,
Shankle, Pauline,
Barnardsville.
Enfield.
Sanford, R. No. 1.
Chapel Hill.
Chapel Hill.
Madison.
N. Wilkesboro.
Fairmont.
Rougemont, R. No. 3.
Hallsboro, R. No. 1.
Efland.
Denver.
Seaboard.
Gastonia.
Oxford, R. No. 1.
China Grove.
Bessemer City, R. No. 2.
Chapel Hill.
Chadbourn.
Murphy.
Matthews.
Graham.
Rougemont, R. No. 1.
Rougemont, R. No. 1.
Charlotte, R. No. 5.
Asheville, R. No. 4.
Selma.
Edgar.
Durham.
Pollocksville, R. No. 1.
Rowland.
Rockingham.
Graham.
Lincolnton.
Cypress Chapel, Va.
Cypress Chapel, Va.
Goldsboro.
Rockingham.
Genoa.
Statesville.
Siler City, R. No. 4.
Stedman.
Biscoe.
Mill Springs.

Sharpe, Chas. Cleveland,
 Shell, Helen,
 Shields, John Montgomery,
 Shotwell, Mary Graves,
 Silverthorne, Lessie E.,
 Simmons, Lottie Pearl,
 Singletary, G. C.,
 Sizemore, Martha Chandler,
 Skeen, Essie,
 Slaughter, Mary,
 Sledge, Clara Bell,
 Smathers, Margaret Sarepta,
 Smathers, Sophia,
 Snyder, Sallie Mae,
 Souther, Noah Harrison,
 Spain, Anna Elizabeth,
 Sparrow, Elizabeth Bonner,
 Speight, Margaret,
 Spencer, Willie Blanche,
 Spurgeon, Pattie Glenn,
 Stephens, Mabel Frances,
 Stokes, Mary Elizabeth,
 Strowd, Grace,
 Strupe, Walter Thomas,
 Struthers, Hester C.,
 Stuart, Joseph Clyde,
 Stuck, Edna,
 Sugg, Mattie B.,
 Swindell, Myrtle,
 Tabor, George Leroy,
 Taylor, Nell,
 Tharpe, Claudia Lea,
 Thompson, Helen Edith,
 Thompson, Ida,
 Thompson, Mary Gray,
 Thorn, Pattie Davis,
 Tilley, Flossie Yates,
 Timberlake, Pearl,
 Toler, Luna Elizabeth,
 Totten, Henry Roland,
 Truitt, Emma,
 Tucker, Lottie,
 Turnage, Nannie Maude,
 Tyer, Annie Lee,

Greensboro, R. No. 6.
 Lenoir, R. No. 3.
 Enfield.
 Oxford.
 Middletown, R. No. 1.
 New Bern, R. No. 3.
 Chapel Hill.
 Clarkesville, Va.
 High Rock.
 Goldsboro.
 Louisburg, R. No. 2.
 Canton.
 Canton.
 High Rock.
 Old Fort.
 Greenville.
 Lowell.
 Windsor, R. No. 1.
 Roxboro.
 Hillsboro.
 Semora.
 Chester, S. C., R. No. 4.
 Chapel Hill,
 Bethania.
 Grist.
 Henderson, R. No. 6.
 Peak, S. C.
 Pinetops.
 Belhaven.
 Raleigh.
 Snow Hill, R. No. 4.
 Harmony.
 Macon.
 Creswell.
 Snow Camp.
 Airlie.
 Hillsboro.
 Louisburg.
 Bentonville, R. No. 1.
 Yadkin College.
 Aulander, R. No. 1.
 Milton.
 Fountain.
 Farmville, R. No. 3.

Tyner, Belle,
Tyson, Euphemia,
Umstead, Reda M.,
Underwood, Amelia Clyde,
Veasey, Alice,
Wagner, John Peter,
Wagner, Mrs. John Peter,
Walker, Emily Hunt,
Wallace, Carita Adeline,
Warlick, Mae,
Warren, Neva,
Warwick, Mary Elizabeth,
Watson, Hattie,
Watson, Kate MacArn,
Weathers, Willa Louise,
Weathersbee, Mrs. F. J.,
Weatherspoon, Janet,
Weaver, Nannie,
Weaver, Robert A.,
Weddell, Laura McNair,
Weeks, Nellie Baxter,
Wellons, Mattie Edmondson,
West, Maggie,
Wheeler, Annie Elizabeth,
Whichard, Minnie,
White, Addie,
White, Florence Alva,
White, Jessie Warren,
White, Mary,
Whitley, Daniel Polycarp,
Whitley, Sallie Virginia,
Williams, Addie,
Williams, Bettie,
Williams, Margaret,
Williams, Mary Lewis,
Williams, Ruth,
Williams, Sudie,
Williford, Clarice,
Wilson, Agnes Frayser,
Wilson, Esther Pearl,
Winkler, Claudia Augusta,
Winslow, Margaret,
Winston, Mrs. P. H.,
Witherington, Florence,
Buie's, R. No. 1.
Lumberton.
Stem, R. No. 1.
Roseboro.
Stem, R. No. 1.
Robeline, La.
Robeline, La.
Raleigh.
New Bern.
Belwood.
Murfreesboro, R. No. 2.
Lumberton.
Red Springs, R. No. 1.
Maxton, R. No. 4.
Apex, R. No. 3.
Enfield.
Sanford.
Rougemont, R. No. 2.
Bentonville, R. No. 1.
Tarboro.
Elizabeth City.
Smithfield.
Moyock.
Whitsett.
Bethel.
Concord.
Ore Hill.
Wendell.
Oxford.
Albemarle, R. No. 3.
Pantego.
Stedman.
South Mills.
South Mills.
Warrenton.
Wallace.
South Mills.
Aulander.
Stovall, R. No. 1.
East Durham.
Winston-Salem.
Marion.
Chapel Hill.
Tuscarora.

Witherington, Julia,
Womble, Lollie Drusilla,
Wood, Fannie Bailey,
Wrenn, Lula Corrinne,
Yoder, Robert Abel,

Tuscarora.
Chapel Hill, R. No. 1.
Emporia, Va.
Garner.
Hickory.

GENERAL SUMMARY

Boards of Government and Instruction and Other Officers

Trustees	81
Professors	
Instructors	
Fellows and Assistants	
Officers of Administration	

THE COLLEGE:		Students	
Senior Class	78		
Junior Class	98		
Sophomore Class	160		
Freshman Class	278		
Special Students	73		
	—		687
THE GRADUATE SCHOOL.....			50
THE SCHOOL OF LAW:			
Students in Law	124		
Special Students in Law.....	11		
	—		135
THE SCHOOL OF MEDICINE:			
Second Year Students.....	27		
First Year Students.....	54		
	—		81
THE SCHOOL OF PHARMACY:			
Third Year Students	5		
Second Year Students	13		
First Year Students	29		
Special Students	11		
	—		58
THE SUMMER SCHOOL (1914):			
Candidates for Degrees:			
Undergraduates	54		
Graduates	23		77
Normal Students	519		
Total Number of Regular Students.....			1088
Deduct for names repeated.....			71
			—
			1017
Total Number of Normal Students.....			519
			—
Grand Total.....			1536

THE ASSOCIATIONS OF THE ALUMNI

THE GENERAL ASSOCIATION

JULIAN S. CARR, President.

WALTER MURPHY, Secretary.

The Alumni Council

ROBERT BINGHAM, *Chairman*, Asheville, N. C.

WALTER MURPHY, *Secretary*, Salisbury, N. C.

J. Y. JOYNER, *Treasurer*, Raleigh, N. C.

1915*

W. S. BERNARD, Chapel Hill, N. C.

J. Y. JOYNER, Raleigh, N. C.

W. H. SWIFT, Greensboro, N. C.

R. H. SYKES, Durham, N. C.

GEORGE STEPHENS, Charlotte, N. C.

1916

W. J. ANDREWS, Raleigh, N. C.

A. L. COX, Raleigh, N. C.

L. I. MOORE, Newbern, N. C.

J. A. PARKER, Charlotte, N. C.

A. M. SCALES, Greensboro, N. C.

The plan of organization adopted by the General Association of the Alumni on June 2, 1911, is as follows:—1. A deliberative body to be known as *The General Assembly of the Alumni of the University of North Carolina*, composed of *delegates* from the Local Associations to meet yearly on such day of Commencement Week as has been previously arranged. 2. A directing board of fifteen to be known as *The Alumni Council*, elected by the General Assembly, the officers of which board shall be the officers of the General Assembly. 3. Local Associations to be known by the names of their respective counties and towns. For a printed form of this constitution in detail application should be made to Mr. Wm. S. Bernard, Chapel Hill, N. C.

Membership in the General Association of the Alumni includes all persons who have matriculated at the University of North Carolina in any department except the Summer School and all who are or have been officers of the institution.

* Term of office expires at end of Spring Term of the University of the year indicated.

LOCAL ASSOCIATIONS

- ALAMANCE COUNTY ALUMNI ASSOCIATION, Burlington, N. C.
W. H. Carroll, *President*.
E. S. W. Dameron, *Secretary*.
- ANSON COUNTY ALUMNI ASSOCIATION, Wadesboro, N. C.
W. K. Boggan, *President*.
J. E. Hart, M. D., *Secretary*.
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SCHEDULE OF EXAMINATIONS

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FRIDAY			
	F	G	H
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THURSDAY			
SATURDAY			

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	D	E	
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WEDNESDAY			
FRIDAY			
	I	K	
TUESDAY	5-6 Botany (S.) 1-2 Chem. II 1-2 Civ. Eng'g. 1-2 Draw'g. I (T. Th.) 1-2 Econ. 27-28 Educ. (T. Th.) 61-62 Educ. (T. Th.) 9-10 El. Eng'g. (T. Th.) 3 El. Eng'g. (S.) 1-2 Eng. I 1-2 Eng. VII 11-12 Eng. VI (T) 59-60 Eng. A French I A French V 1-2 Ger. I 61-62 Greek (T. Th.) 1-2 Hist. III 3-4 Hist. 5-6 Latin (S.) 11-12 Latin (T. Th.) 3-4 Math. I 3-4 Spanish	5-6 Botany (S.) 21-22 Civ. Eng'g. 23-24 Civ. Eng'g. (Th.) 15-16 Econ. (T. Th.) 1-2 Eng. VIII 11-12 Eng. III (Th.) 45-46 Eng. 21-22 Ger. 1-2 Greek (Th.) 5-6 Hist. (T. Th.) 9-10 Hist. (T. Th.) 1-2 Latin V (T.) 1-2 Latin VI (T.) 1-2 Latin I (Th.) 1-2 Latin IV (Th.) 1-2 Math. II (T.) 1-2 Math. IV (T.) 1-2 Math. VI (T.) 1-2 Math. VIII (Th.) 1-2 Math. X (Th.) 3-4 Philos. (T. Th.) 13-14 Philos. (T. Th.) 11-12 Phys. (T. Th.)	A Educ. 11-12 Eng. IV (T.) Laboratory: 1-2 Bot. I (T.) 3-4 Bot. (Th.) 1-2 Chem. II (T.) 1-2 Chem. IV (Th.) 31-32 Chem. (T. Th.) 48-49 Chem. (T. Th.) 1-2 Draw'g. II (Th.) 3-4 Geol. (T. Th.) 1-2 Phys. II (T.) 3-4 Phys. (Th.) 1-2 Zool. I (Th.) 3-4 Zool. (Th.)
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